

APPENDIX 1
EMISSION UNITS APPLICATION FORMS

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FUGITIVE AND MOBILE EMISSION SOURCES (FORMS NOT INCLUDED)

Detailed fugitive emission calculations are provided at the end of Appendix 5. Fugitive emission calculations and source parameters are also provided in Appendix 8-A.

PROPOSED PROJECT DESIGN BASIS

The design specifications for the proposed project are provided in this application. These are the final preliminary emission source design parameters that are to be maintained for purposes of this air permit application.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Supercritical Pulverized Coal-Fired Boiler
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number S2.001
- e. Date equipment manufactured: TBD
- f. Please check one: Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,219 meters N; 746,849 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 153 W 159 H 330
Equipment dimensions are the dimensions of the boiler building.

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. **Maximum** design horsepower **OUTPUT** (horsepower per hour) _____
(Please provide for internal combustion engines only)
- b. **Maximum** design heat **INPUT** (million Btu per hour) 6048
(Please provide for all combustion units except for internal combustion engines)
- c. *Requested operating time: time of day _____ to _____

Hours per day _____ Days per year _____ Hours per year _____

*Note: Please complete if other than the maximum hours of operation (24 hours per day, 8760 hours per year), are being requested. The permit will be limited to these values.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 3 - Fuel Usage

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btu's)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	gallons				
	gallons				
Gasoline	gallons				
Propane	cubic feet				
Natural Gas	cubic feet				
*Waste Oil	gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s) Sub-Bituminous Coal from the Powder River Basin or South Wyoming								
SB	350 - 375	8078 – 9082 BTU/lb	3.5 – 11.4	0.12 – 1.40		19.42% – 30.40%	28.48% – 36.52%	47.50 – 53.24%

If more than one type of fuel is combusted, under this operating scenario, please specify primary fuel and percentage on a maximum hourly and annual basis. If fuel blending is the primary fuel, identify percentages of each fuel blended. Attach additional information to this form if necessary.

*Firing of waste oil will require multi-metals test to ensure fuel is non-hazardous.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment/Exhaust Stack Parameters. This section must be completed.

-Complete for emissions exhausting through a stack, chimney or vent: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify "uncontrolled" if no pollution control device is installed)	Wet Scrubber	Fabric Filter Dust Collector
Pollutant(s) Controlled	SO ₂ , Hg, H ₂ SO ₄ , Acid Gases	PM, PM ₁₀ , Hg, Trace Metals
Manufacturer	TBD	TBD
Manufacturer's Guarantee (see Note 1)	Not Available	Not Available
Stack height (feet from ground level)	730	730
Stack inside diameter (feet)	24.4	24.4
Temperature (°F) at design capacity	130	130
Stack exit velocity (feet per second)	65.0 @ 100% load	65.0 @ 100% load
Gas volume flow rate: actual cubic feet per minute	1,823,619 @ 100% load	1,823,619 at 100% load
Gas volume flow rate: dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	None	None

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment/Exhaust Stack Parameters. This section must be completed.

-Complete for emissions exhausting through a stack, chimney or vent: (baghouse, wet scrubber, cyclone, low NO_X burner, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify "uncontrolled" if no pollution control device is installed)	Low NO _X Burners, Over-Fire Air ^(Note2) , and Selective Catalytic Reduction	
Pollutant(s) Controlled	NO _X	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 1)	Not Available	
Stack height (feet from ground level)	730	
Stack inside diameter (feet)	24.4	
Temperature (°F) at design capacity	130	
Stack exit velocity (feet per second)	65.0 @ 100% load	
Gas volume flow rate: actual cubic feet per minute	1,823,619 at 100% load	
Gas volume flow rate: dry standard cubic feet per minute		
Unusual stack characteristics (e.g., raincap, horizontal discharge)	None	

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

Note 2: The OFA system on the main boiler may consist of some form of secondary or tertiary air system, and will be determined during final project design.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

Continuous emission monitoring system (CEMS) will be installed for

- NO_X: Method 7 or 7E
- CO: Method 10
- SO₂: Method 6 or 6C, at outlet and optionally at inlet for percent reduction requirements
- Continuous Opacity Monitoring System (COMS) for opacity
- Oxygen or CO₂: as diluent, Method 3A
- Hg: As required in final mercury NSPS (40 CFR 60 Subpart Da, HHHH).
- Fuel Oil: Mass flow meter to fire box
- Systems will be installed and operated in accordance with CFR 40 Part 75.

Daily Sampling may apply for coal sulfur content and heating value in accord with Method 19. Fuel sulfur sampling optionally may be used for compliance with percent SO₂ reductions (40 CFR 60 Subpart Da).

Additionally annual stack tests will be conducted using the following or an alternate test method as approved by the Administrator through a proposed testing protocol

- PM/PM₁₀ filterable only : Method 5, 17, 201 or 201A/202, filterable only for compliance with BACT limit of 0.010 lb/MMBtu.
- PM/PM₁₀ including condensable, while eliminating artifacts and false contributors, for compliance with 0.030 lb/MMBtu, filterable plus condensable limit.
- HF and HCl: Method 26
- H₂SO₄: Controlled Condensation Procedure test, CAE Method 8B, or an equivalent approved test method.
- VOC: Method 25 or 25A
- Pb: Method 29
- Hg: As required in final mercury NSPS (40 CFR 60 Subpart Da, HHHH).

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

1. At all times, including startup, shutdown, and malfunction, the emission unit will be operated in a manner consistent with good air pollution control practices.
2. Pollution control device parameters will be monitored in accordance with manufacturer's recommendations and/or in accordance with the facility's operations and maintenance procedures.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	60.5	265	See emission calculations in Appendix 5
Particulates as PM ₁₀	181.4	795	See emission calculations in Appendix 5
Sulfur Dioxide (see note 1)	483.8	1351	See emission calculations in Appendix 5
Carbon Monoxide	604.8	2,649	See emission calculations in Appendix 5
Oxides of Nitrogen	362.9	1,590	See emission calculations in Appendix 5
Volatile Organic Compounds	18.1	80	See emission calculations in Appendix 5
Lead	1.21	5.3	For Detailed HAP breakdown - See emission calculations in Appendix 5
Hydrogen Sulfide	N/A	N/A	
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Total HAPs	19.9	87.1	For Detailed HAP breakdown - See emission calculations in Appendix 5
Max Individual HAP (Hydrogen Chloride)	11.6	50.6	For Detailed HAP breakdown - See emission calculations in Appendix 5
Other Regulated Pollutants (Specify ²)			
Sulfuric Acid Mist	30.2	133	See emission calculations in Appendix 5
Hydrogen Fluoride	1.45	6.4	For Detailed HAP breakdown - See emission calculations in Appendix 5
Mercury (subbituminous coal)	0.022	0.098	For Detailed HAP breakdown - See emission calculations in Appendix 5
Note 1: Hourly SO₂ emission rate reflects the 3-hr limit. The 3-hr SO₂ modeling results reflect this higher 3-hour limit. The annual ton/yr SO₂ emission rate is based off the requested permit limit for the main boiler unit of 1351 tons/year.			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B.2203 (State Only Requirement) <u>Emissions of Particulate Matter - Fuel Burning Equipment</u> 1. Source may not cause or permit the emission of PM ₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas: <ol style="list-style-type: none"> For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{-0.231}$ For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{-0.568}$ 2. For the purposes of paragraphs b and c of subsection 1: <ol style="list-style-type: none"> "X" means the operating rate in million Btu's per hour. "Y" means the allowable rate of emission in pounds per million Btu's. 	EPA Method 5 or 17 or Method 201A/202	In compliance (PM less than 0.121 lb/MMBtu)	
SIP 445.731((1)(a) - (Federally Enforceable SIP Requirement)) <u>Particulate Matter - Fuel Burning Equipment</u> Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:	Heat input in millions of BTU/hour Maximum allowable emission of particulate matter in pounds per hour per million Up to and including 10 0.600 100 0.352 1,000 0.206 10,000 0.091 100,000 0.025	EPA Method 5 or 17 or Method 201A/202	In compliance (PM less than 0.0991 lb/MMBtu)
SIP 445.731((1)(b) - (Federally Enforceable SIP Requirement)) <u>Particulate Matter - Fuel Burning Equipment</u> For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{-0.231}$ Where "X" = maximum equipment capacity rate in million Btu's per hour. $"Y" = allowable rate of emission in pounds per million Btu's.$	Not Applicable – PC Boiler is more than 4,000 MMBtu/hr	EPA Method 5 or 17 or Method 201A/202	In compliance (PM less than 0.121 lb/MMBtu)
SIP 445.731((1)(c) - (Federally Enforceable SIP Requirement)) <u>Particulate Matter - Fuel Burning Equipment</u> For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{-0.568}$ Where "X" = maximum equipment capacity rate in million Btu's per hour. $"Y" = allowable rate of emission in pounds per million Btu's.$	EPA Method 5 or 17 or Method 201A/202	In compliance (PM less than 0.121 lb/MMBtu)	

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Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B.22033, 445B.22027 (State Only Requirement) Emissions of Particulate Matter - Sources Not Otherwise Limited <ol style="list-style-type: none"> 1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. 2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 4.10P^{0.67}$ 3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 55P^{0.11} - 40$ 4. For the purposes of subsections 2 and 3: <ol style="list-style-type: none"> (a) "E" means the maximum rate of emission in pounds per hour. (b) "P" means the maximum allowable throughput in tons per hour. 	SIP 445.732 - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources <p>Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.</p>	<p>SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: $E = 0.0193P^{0.67} (4.10P^{0.67})$</p> <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p> <p>SIP 445.732 (3) - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources <p>When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: $E = 11.78P^{0.11} - 18.14 (55P^{0.11} - 40)$</p> <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p> </p>	Not Applicable – covered by NAC SIP 445.731 (1)(C)

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement)</u> Sulfur Emissions - Fuel Burning Equipment 1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$ 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: $\text{Liquid fuel, } Y = 0.4X$ $\text{Solid Fuel, } Y = 0.6X$ $\text{Combustion, } Y = (L(0.4) - S(0.6))/(L + S)$ 4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour. 5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.		Monitoring with CEMS	In Compliance (SO ₂ less than 3,629 lbs/hr)
<u>SIP Article 8.1 and 8.2 (Federal/Enforceable SIP Requirement)</u> Sulfur Emissions - Fuel Burning Equipment 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$ $\text{"X" = Operating heat input in millions of kg-cal (Btu's) per hour.}$ $\text{"Y" = Allowable rate of sulfur emission in kg (pounds) per hour.}$ 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: $\frac{\text{Liquid Fuel}}{Y = 0.7X \quad (Y = 0.4X)} \quad \frac{\text{Solid Fuels}}{Y = 1.1X \quad (Y = 0.6X)}$ $\frac{\text{Combination Fuel}}{Y = \frac{L(0.7) + S(1.1)}{L + S}}$ $\text{"X" = Operating input in millions of kg-cal (Btu's) per hour.}$ $\text{"Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.}$ $\text{"L" = Percentage of total heat input derived from liquid fuel.}$ $\text{"S" = Percentage of total heat input derived from solid fuel.}$		Monitoring with CEMS	In Compliance (SO ₂ less than 3,629 lbs/hr)
<u>NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement)</u> Other Processes Which Emit Sulfur	1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.	Not Applicable - No sulfur bearing materials processed (excluding fuel)	

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ <p>When E is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p> <p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>	<p>Not Applicable - No sulfur bearing materials processed (excluding fuel)</p>		
<p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p><u>Maximum Opacity of Emissions</u></p>	<p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <ul style="list-style-type: none"> (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A, of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>	<p>Opacity COMS will be installed</p>	<p>In Compliance</p>
<p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p>Visible Emissions from Stationary Sources</p>	<p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>	<p>Opacity COMS will be installed</p>	<p>In Compliance</p>
<p>40 CFR 60.40a – NSPS Subpart Da Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978.</p>	<p>This regulation affects each electric utility steam generating unit that is capable of combusting more than 250 MMBtu/hour heat input of fossil fuel, and for which construction or modification is commenced after September 18, 1978.</p>	<p>Performance testing will be conducted in accord with §60.8, and monitoring will be conducted with CEMS, or an approved alternate monitoring method.</p>	<p>In Compliance</p>
<p>40 CFR 72, 73, 75, 77 – Federal Acid Rain Program Provisions</p>	<p>These regulations consist of monitoring, recordkeeping and reporting requirements for the pulverized coal-fired boiler, and require emissions allowance be held in an account.</p>	<p>Performance testing will be conducted in accord with 40 CFR 75, and monitoring, recordkeeping and reporting will be conducted as required.</p>	<p>In Compliance</p>

**COMBUSTION EQUIPMENT
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 – Equipment Description

- a. Type of equipment Auxiliary Boiler #1
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number S2.002
- e. Date equipment manufactured: TBD
- f. Please check one:
 Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,331 meters N; 746,643 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 73 W 99 H 30

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 – Design Rate/Operating Parameters

- a. **Maximum** design horsepower **OUTPUT** (horsepower per hour) _____
(Please provide for internal combustion engines only)
- b. **Maximum** design heat **INPUT** (million Btu per hour) 86.4
(Please provide for all combustion units except for internal combustion engines)
- c. *Requested operating time: time of day 0000 to 2400
Hours per day _____ Days per year _____ Hours per year 550

*Note: Please complete if other than the maximum hours of operation (24 hours per day, 8760 hours per year), are being requested. The permit will be limited to these values.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 3 – Fuel Usage

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btu's)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	gallons				
Distillate Fuel Oil	631 gallons	137,000 Btu/gal	Neg.	0.0015 wt. %	Neg.
Gasoline	gallons				
Propane	cubic feet				
Natural Gas	cubic feet				
*Waste Oil	gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal – Specify Type(s)								

If more than one type of fuel is combusted, under this operating scenario, please specify primary fuel and percentage on a maximum hourly and annual basis. If fuel blending is the primary fuel, identify percentages of each fuel blended. Attach additional information to this form if necessary.

*Firing of waste oil will require multi-metals test to ensure fuel is non-hazardous.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 4 – Pollution Control Equipment/Exhaust Stack Parameters. This section must be completed.

-Complete for emissions exhausting through a stack, chimney or vent: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify “uncontrolled” if no pollution control device is installed)	Low-NO _x Burners	
Pollutant(s) Controlled	NO _x	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 1)	Not Available	
Stack height (feet from ground level)	98.0	
Stack inside diameter (feet)	2.924	
Temperature (°F) at design capacity	284	
Stack exit velocity (feet per second)	82.0	
Gas volume flow rate: actual cubic feet per minute	33,038	
Gas volume flow rate: dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	None	

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 5 – Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

The hours of operation and amount of fuel combusted for the Auxiliary Boiler will be recorded in a logbook and maintained onsite. Conduct initial performance test for NO_x. Obtain fuel receipts verifying use of ultra low sulfur fuel oil (< 0.0015 wt. %).

Section 6 – Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

1. At all times, including startup and shutdown, the emission unit will be operated in a manner consistent with good air pollution control practices.
2. Engine operational parameters will be monitored in accordance with manufacturer's recommendations and/or in accordance with the facility's operations and maintenance procedures.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 7 – Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	1.51	0.42	See emission calculations in Appendix 5
Particulates as PM ₁₀	2.08	0.57	See emission calculations in Appendix 5
Sulfur Dioxide	0.14	0.04	See emission calculations in Appendix 5
Carbon Monoxide	3.15	0.87	See emission calculations in Appendix 5
Oxides of Nitrogen	8.64	2.38	See emission calculations in Appendix 5
Volatile Organic Compounds	0.21	0.06	See emission calculations in Appendix 5
Lead	7.8E-04	2.1E-04	See emission calculations in Appendix 5
<hr/>			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Total HAPs	4.78E-02	1.31E-02	See emission calculations in Appendix 5
Max. Individual HAP	3.85E-02	1.06E-02	See emission calculations in Appendix 5
Other Regulated Pollutants (Specify ²)			
Sulfuric Acid Mist	5.8E-03	1.6E-03	See emission calculations in Appendix 5
<hr/>			
Annual emissions are based off assumption of 550 hours/year of operation.			
PM₁₀ emissions include both filterable and condensable PM			
<hr/>			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445:2203 (<i>State Only Requirement</i>)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{-0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. 	<p>In compliance (PM less than 0.364 lb/MMBtu)</p> <p>EPA Method 5 or 17 or Method 201A/202</p>														
<p>SIP 445.731(1)(a) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" data-bbox="796 1199 992 1833"> <thead> <tr> <th data-bbox="796 1199 861 1833">Heat input in millions of BTU/hour</th> <th data-bbox="861 1199 992 1833">Maximum allowable emission of particulate matter in pounds per hour per million Btu</th> </tr> </thead> <tbody> <tr> <td data-bbox="861 1199 894 1833">Up to and including 10</td> <td data-bbox="894 1199 926 1833">..... 0.600</td> </tr> <tr> <td data-bbox="926 1199 959 1833">100</td> <td data-bbox="959 1199 992 1833">..... 0.352</td> </tr> <tr> <td data-bbox="959 1199 992 1833">1,000</td> <td data-bbox="992 1199 1024 1833">..... 0.206</td> </tr> <tr> <td data-bbox="1024 1199 1057 1833">10,000</td> <td data-bbox="1057 1199 1090 1833">..... 0.091</td> </tr> <tr> <td data-bbox="1090 1199 1122 1833">100,000</td> <td data-bbox="1122 1199 1155 1833">..... 0.025</td> </tr> </tbody> </table> <p>SIP 445.731(1)(b) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{-0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(1)(c) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{-0.568}$</p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(3) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million Btu	Up to and including 10 0.600	100 0.352	1,000 0.206	10,000 0.091	100,000 0.025	<p>In compliance (PM less than 0.352 lb/MMBtu)</p> <p>EPA Method 5 or 17 or Method 201A/202</p>	<p>In compliance (PM less than 0.364 lb/MMBtu)</p> <p>EPA Method 5 or 17 or Method 201A/202</p>	
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SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22033, 445B.22027 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Sources Not Otherwise Limited</p> <p>1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.</p> <p>2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:</p> $E = 4.10P^{0.67}$ <p>3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:</p> $E = 55P^{0.11} - 40$ <p>4. For the purposes of subsections 2 and 3:</p> <p>(a) "E" means the maximum rate of emission in pounds per hour.</p> <p>(b) "P" means the maximum allowable throughput in tons per hour.</p>	<p>Not Applicable – covered by NAC SIP 445.731 (1)(b)</p>		
<p>SIP 445.732 - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.</p>	<p>Not Applicable – covered by NAC SIP 445.731 (1)(b)</p>		
<p>SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:</p> $E = 0.0193P^{0.67} (4.10P^{0.67})$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour.</p> <p>"P" = Process weight rate in kilograms (tons) per hour.</p>	<p>Not Applicable – covered by NAC SIP 445.731 (1)(b)</p>		
<p>SIP 445.732 (3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:</p> $E = 11.78P^{0.11} - 18.14 (55P^{0.11} - 40)$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour.</p> <p>"P" = Process weight rate in kilograms (tons) per hour.</p>			

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EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement)</u> Sulfur Emissions - Fuel Burning Equipment 1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$ 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: $\text{Liquid fuel, } Y = 0.4X$ $\text{Solid Fuel, } Y = 0.6X$ $\text{Combustion, } Y = (L(0.4) - S(0.6))/(L + S)$ 4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour. 5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.		Monitoring Fuel Sulfur Content	In Compliance (SO ₂ less than 34.56 lbs/hr)
<u>SIP Article 8.1 and 8.2 (Federally Enforceable SIP Requirement)</u> Sulfur Emissions - Fuel Burning Equipment 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$ $\text{"X" = Operating heat input in millions of kg-cal (Btu's) per hour.}$ $\text{"Y" = Allowable rate of sulfur emission in kg (pounds) per hour.}$	Not Applicable – Auxiliary Boiler is more than 250 MMBtu/hr		
SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: $\frac{\text{Liquid Fuel}}{Y = 0.7X \quad (Y = 0.4X)} \quad \frac{\text{Solid Fuels}}{Y = 1.1X \quad (Y = 0.6X)}$ $\frac{\text{Combustion Fuel}}{Y = \frac{L(0.7) + S(1.1)}{L + S}}$ $\text{"X" = Operating input in millions of kg-cal (Btu's) per hour.}$ $\text{"Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.}$ $\text{"L" = Percentage of total heat input derived from liquid fuel.}$ $\text{"S" = Percentage of total heat input derived from solid fuel.}$		Monitoring Fuel Sulfur Content	In Compliance (SO ₂ less than 34.56 lbs/hr)
<u>NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement)</u> Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.	Not Applicable - No sulfur bearing materials processed (excluding fuel)		

SECTION 8

**EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS**

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ <p>When E is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p> <p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>	<p>Not Applicable - No sulfur bearing materials processed (excluding fuel)</p>		
<p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p><u>Maximum Opacity of Emissions</u></p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <ul style="list-style-type: none"> (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>	<p>Observation of visible emissions in accord with approved protocol</p>		<p>In Compliance</p>
<p>SIP 445.771 <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Visible Emissions from Stationary Sources</u></p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>	<p>Observation of visible emissions in accord with approved protocol</p>		<p>In Compliance</p>
<p>40 CFR 60.40b – NSPS Subpart Db</p> <p><u>Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units for Which Construction, Modification, or Reconstruction Commenced After June 19, 1984</u></p> <p>This regulation applies to each steam generating unit that is capable of combusting more than 100 MMBtu/hour heat input of fossil fuel, and for which construction or modification is commenced after June 19, 1984. More detailed regulatory analysis can be found in Appendix 3 of this air permit application.</p>	<p>Performance testing will be conducted in accord with §60.8, and monitoring will be conducted with CEMS, or an approved alternate monitoring method.</p>		<p>In Compliance</p>

**COMBUSTION EQUIPMENT
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 – Equipment Description

- a. Type of equipment Auxiliary Boiler #2
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number S2.003
- e. Date equipment manufactured: TBD
- f. Please check one:
 Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,332 meters N; 746,650 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 73 W 99 H 30

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 – Design Rate/Operating Parameters

- a. **Maximum** design horsepower **OUTPUT** (horsepower per hour) _____
(Please provide for internal combustion engines only)
- b. **Maximum** design heat **INPUT** (million Btu per hour) 86.4
(Please provide for all combustion units except for internal combustion engines)
- c. *Requested operating time: time of day 0000 to 2400
Hours per day _____ Days per year _____ Hours per year 550

*Note: Please complete if other than the maximum hours of operation (24 hours per day, 8760 hours per year), are being requested. The permit will be limited to these values.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 3 – Fuel Usage

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btu's)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	gallons				
Distillate Fuel Oil	631 gallons	137,000 Btu/gal	Neg.	0.0015 wt. %	Neg.
Gasoline	gallons				
Propane	cubic feet				
Natural Gas	cubic feet				
*Waste Oil	gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal – Specify Type(s)								

If more than one type of fuel is combusted, under this operating scenario, please specify primary fuel and percentage on a maximum hourly and annual basis. If fuel blending is the primary fuel, identify percentages of each fuel blended. Attach additional information to this form if necessary.

*Firing of waste oil will require multi-metals test to ensure fuel is non-hazardous.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 4 – Pollution Control Equipment/Exhaust Stack Parameters. This section must be completed.

-Complete for emissions exhausting through a stack, chimney or vent: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify “uncontrolled” if no pollution control device is installed)	Low-NO _x Burners	
Pollutant(s) Controlled	NO _x	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 1)	Not Available	
Stack height (feet from ground level)	98.0	
Stack inside diameter (feet)	2.924	
Temperature (°F) at design capacity	284	
Stack exit velocity (feet per second)	82.0	
Gas volume flow rate: actual cubic feet per minute	33,038	
Gas volume flow rate: dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	None	

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 5 – Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

The hours of operation and amount of fuel combusted for the Auxiliary Boiler will be recorded in a logbook and maintained onsite. Conduct initial performance test for NO_x. Obtain fuel receipts verifying use of ultra low sulfur fuel oil (< 0.0015 wt. %).

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**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

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Annual emissions are based off assumption of 550 hours/year of operation.			
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<p>SIP 445.731(1)(a) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" data-bbox="796 97 997 925"> <thead> <tr> <th data-bbox="796 97 850 925">Heat input in millions of BTU/hour</th> <th data-bbox="850 97 997 925">Maximum allowable emission of particulate matter in pounds per hour per million Btu</th> </tr> </thead> <tbody> <tr> <td data-bbox="796 97 850 925">Up to and including 10</td> <td data-bbox="850 97 904 925">..... 0.600</td> </tr> <tr> <td data-bbox="796 97 850 925">100</td> <td data-bbox="850 97 904 925">..... 0.352</td> </tr> <tr> <td data-bbox="796 97 850 925">1,000</td> <td data-bbox="850 97 904 925">..... 0.206</td> </tr> <tr> <td data-bbox="796 97 850 925">10,000</td> <td data-bbox="850 97 904 925">..... 0.091</td> </tr> <tr> <td data-bbox="796 97 850 925">100,000</td> <td data-bbox="850 97 904 925">..... 0.025</td> </tr> </tbody> </table>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million Btu	Up to and including 10 0.600	100 0.352	1,000 0.206	10,000 0.091	100,000 0.025	<p>In compliance (PM less than 0.352 lb/MMBtu)</p> <p>EPA Method 5 or 17 or Method 201A/202</p>		
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100,000 0.025														
<p>SIP 445.731(1)(b) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation:</p> $Y = 1.02X^{-0.231}$ <p>Where "X" = maximum equipment capacity rate in million Btu's per hour.</p> <p>"Y" = allowable rate of emission in pounds per million Btu's.</p>	<p>In compliance (PM less than 0.364 lb/MMBtu)</p> <p>EPA Method 5 or 17 or Method 201A/202</p>														
<p>SIP 445.731(1)(c) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation:</p> $Y = 17.0X^{-0.568}$ <p>where "X" = maximum equipment capacity rate in million Btu's per hour.</p> <p>"Y" = allowable rate of emission in pounds per million Btu's.</p>	<p>Not Applicable – Auxiliary Boiler is less than 4,000 MMBtu/hr</p>														
<p>SIP 445.731(3) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	<p>Auxiliary Boiler is more than 4,000 MMBtu/hr, covered by NAC SIP 445.731(1)(b)</p>														

SECTION 8
EMISSION UNIT SPECIFIC

APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22033, 445B.22027 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Sources Not Otherwise Limited</p> <p>1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.</p> <p>2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:</p> $E = 4.10P^{0.67}$ <p>3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:</p> $E = 55P^{0.11} - 40$ <p>4. For the purposes of subsections 2 and 3:</p> <p>(a) "E" means the maximum rate of emission in pounds per hour.</p> <p>(b) "P" means the maximum allowable throughput in tons per hour.</p>	<p>Not Applicable – covered by NAC SIP 445.731 (1)(b)</p>		
<p>SIP 445.732 - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.</p>	<p>Not Applicable – covered by NAC SIP 445.731 (1)(b)</p>		
<p>SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:</p> $E = 0.0193P^{0.67} (4.10P^{0.67})$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour.</p> <p>"P" = Process weight rate in kilograms (tons) per hour.</p>	<p>Not Applicable – covered by NAC SIP 445.731 (1)(b)</p>		
<p>SIP 445.732 (3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:</p> $E = 11.78P^{0.11} - 18.14 (55P^{0.11} - 40)$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour.</p> <p>"P" = Process weight rate in kilograms (tons) per hour.</p>			

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement)</u> Sulfur Emissions - Fuel Burning Equipment 1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$ 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: $\text{Liquid fuel, } Y = 0.4X$ $\text{Solid Fuel, } Y = 0.6X$ $\text{Combustion, } Y = (L(0.4) - S(0.6))/(L + S)$ 4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour. 5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.		Monitoring Fuel Sulfur Content	In Compliance (SO ₂ less than 34.56 lbs/hr)
<u>SIP Article 8.1 and 8.2 (Federal/Enforceable SIP Requirement)</u> Sulfur Emissions - Fuel Burning Equipment 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$ $\text{"X" = Operating heat input in millions of kg-cal (Btu's) per hour.}$ $\text{"Y" = Allowable rate of sulfur emission in kg (pounds) per hour.}$ 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: $\frac{\text{Liquid Fuel}}{Y = 0.7X \quad (Y = 0.4X)} \quad \frac{\text{Solid Fuels}}{Y = 1.1X \quad (Y = 0.6X)}$ $\frac{\text{Combustion Fuel}}{Y = \frac{L(0.7) + S(1.1)}{L + S}}$ $\text{"X" = Operating input in millions of kg-cal (Btu's) per hour.}$ $\text{"Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.}$ $\text{"L" = Percentage of total heat input derived from liquid fuel.}$ $\text{"S" = Percentage of total heat input derived from solid fuel.}$		Monitoring Fuel Sulfur Content	In Compliance (SO ₂ less than 34.56 lbs/hr)
<u>NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement)</u> <u>Other Processes Which Emit Sulfur</u> 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.		Not Applicable - No sulfur bearing materials processed (excluding fuel)	

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ <p>When E is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour;</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p> <p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>	<p>Not Applicable - No sulfur bearing materials processed (excluding fuel)</p>		
<p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p><u>Maximum Opacity of Emissions</u></p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <ul style="list-style-type: none"> (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>	<p>Observation of visible emissions in accord with approved protocol</p>		
<p>SIP 445.771 <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Visible Emissions from Stationary Sources</u></p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p> <p>40 CFR 60.40b – NSPS Subpart Db</p> <p><u>Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units for Which Construction, Modification, or Reconstruction Commenced After June 19, 1984</u></p> <p>This regulation applies to each steam generating unit that is capable of combusting more than 100 MMBtu/hour heat input of fossil fuel, and for which construction or modification is commenced after June 19, 1984. More detailed regulatory analysis can be found in Appendix 3 of this air permit application.</p>	<p>Observation of visible emissions in accord with approved protocol</p>	<p>Performance testing will be conducted in accord with §60.8, and monitoring will be conducted with CEMS, or an approved alternate monitoring method.</p>	

**COMBUSTION EQUIPMENT
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 – Equipment Description

- a. Type of equipment Emergency Generator Engine
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number S2.004
- e. Date equipment manufactured: TBD
- f. Please check one:
 Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,331 meters N; 746,563 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 40 W 10 H 10

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 – Design Rate/Operating Parameters

- a. **Maximum** design horsepower **OUTPUT** (horsepower per hour) 1482
(Please provide for internal combustion engines only)
- b. **Maximum** design heat **INPUT** (million Btu per hour) 12.57
(Please provide for all combustion units except for internal combustion engines)
- c. *Requested operating time: time of day 0000 to 2400

Hours per day 24 Days per year Hours per year 100

*Note: Please complete if other than the maximum hours of operation (24 hours per day, 8760 hours per year), are being requested. The permit will be limited to these values.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 3 – Fuel Usage

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btu's)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	gallons				
Distillate Fuel Oil	91.8 gallons	137,000 Btu/gal	Neg.	0.0015 wt. %	Neg.
Gasoline	gallons				
Propane	cubic feet				
Natural Gas	cubic feet				
*Waste Oil	gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal – Specify Type(s)								

If more than one type of fuel is combusted, under this operating scenario, please specify primary fuel and percentage on a maximum hourly and annual basis. If fuel blending is the primary fuel, identify percentages of each fuel blended. Attach additional information to this form if necessary.

*Firing of waste oil will require multi-metals test to ensure fuel is non-hazardous.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 4 – Pollution Control Equipment/Exhaust Stack Parameters. This section must be completed.

-Complete for emissions exhausting through a stack, chimney or vent: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify “uncontrolled” if no pollution control device is installed)	Uncontrolled	
Pollutant(s) Controlled	None	
Manufacturer	NA	
Manufacturer's Guarantee (see Note 1)	NA	
Stack height (feet from ground level)	45.0	
Stack inside diameter (feet)	1.0	
Temperature (°F) at design capacity	870	
Stack exit velocity (feet per second)	192.22 (without raincap)	
Gas volume flow rate: actual cubic feet per minute	9058	
Gas volume flow rate: dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	RAINCAP	

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 5 – Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

The hours of operation for the standby diesel engine will be recorded in a logbook and maintained onsite.

Section 6 – Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

1. At all times, including startup and shutdown, the emission unit will be operated in a manner consistent with good air pollution control practices.
2. Engine operational parameters will be monitored in accordance with manufacturer's recommendations and/or in accordance with the facility's operations and maintenance procedures.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 7 – Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.49	0.02	See emission calculations in Appendix 5
Particulates as PM ₁₀	0.49	0.02	See emission calculations in Appendix 5
Sulfur Dioxide	0.36	0.02	See emission calculations in Appendix 5
Carbon Monoxide	8.49	0.42	See emission calculations in Appendix 5
Oxides of Nitrogen	15.68	0.78	See emission calculations in Appendix 5
Volatile Organic Compounds	See Note 1	See Note 1	See emission calculations in Appendix 5
Lead	1.1E-04	5.7E-06	See emission calculations in Appendix 5
<hr/>			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Total HAPs	2.33E-02	1.2E-03	See emission calculations in Appendix 5
Max. Individual HAP	9.76E-03	4.9E-04	See emission calculations in Appendix 5
Other Regulated Pollutants (Specify ²)			
Annual emissions are based on maximum operation of 100 hours/year			
Note 1: Emission standards for this engine is based on EPA Tier standards, which are based on a combination of NO _X +NMHC; therefore, VOC emissions have been included in NO _X total which provides a conservative NO _X emission rate that is used in the dispersion modeling.			

*Note: Alternative emissions limitations (e.g., lb/MMBu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.2203 (<i>State Only Requirement</i>)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{-0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{-0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. 			<p>In compliance (PM less than 0.568 lb/MMBtu)</p> <p>In compliance (PM less than 0.352 lb/MMBtu)</p> <p>In compliance (PM less than 0.568 lb/MMBtu)</p>
<p>SIP 445.731(1)(a) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p>			
<p>SIP 445.731(1)(b) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{-0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(1)(c) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{-0.568}$</p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(3) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>			

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
Emissions of Particulate Matter - Sources Not Otherwise Limited NAC 445B.22033, 445B.22027 <i>[State Only Requirement]</i> <p>1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM_{10} to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. 2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 4.10P^{0.67}$ 3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 55P^{0.11} - 40$ 4. For the purposes of subsections 2 and 3: (a) "E" means the maximum rate of emission in pounds per hour. (b) "P" means the maximum allowable throughput in tons per hour.</p>	Covered by NAC SIP 445.731(1)(b)		
SIP 445.732 - <i>(Federally Enforceable SIP Requirement)</i> Particulate Matter - Industrial Sources Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.	Covered by NAC SIP 445.731(1)(b)		
SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: $E = 0.0193P^{0.67}$ ($4.10P^{0.67}$) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
SIP 445.732 (3) - <i>(Federally Enforceable SIP Requirement)</i> Particulate Matter - Industrial Sources When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: $E = 11.78P^{0.11} - 18.14$ ($55P^{0.11} - 40$) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.	Covered by NAC SIP 445.731(1)(b)		
NAC 445B.2204, 445B.22043, 445B.22047 <i>(State Only Requirement)</i> Sulfur Emissions - Fuel Burning Equipment 1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$ 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: Liquid fuel, $Y = 0.4X$ Solid Fuel, $Y = 0.6X$ Combination, $Y = (L(0.4) - S(0.6))/(L + S)$	Monitoring Fuel Sulfur Content	In compliance – compliance based on use of ultra low-sulfur distillate fuel oil. SO_2 emissions are less than 8.8 lbs/hr	
4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.			
5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.			

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EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
SIP Article 8.1 and 8.2 (Federally Enforceable SIP Requirement) Sulfur Emissions - Fuel Burning Equipment 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$ "X" = Operating heat input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.	SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: $\text{Liquid Fuel} \quad Y = 0.7X \quad (Y = 0.4X)$ $\text{Solid Fuels} \quad Y = 1.1X \quad (Y = 0.6X)$ $\text{Combination Fuel} \quad Y = \frac{L(0.7) + S(1.1)}{L+S}$ "X" = Operating input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour. "L" = Percentage of total heat input derived from liquid fuel. "S" = Percentage of total heat input derived from solid fuel.	Not Applicable – emergency generator engine is less than 250 MMbtu/hr	In compliance – compliance based on use of ultra low-sulfur distillate fuel oil. SO ₂ emissions are less than 8.8 lbs/hr
NAC 445.746 - (Federally Enforceable SIP Requirement) Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.	SIP 445.746 - (Federally Enforceable SIP Requirement) Other Sulfur Emitting Processes SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation: $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ When E is equal to or greater than 5 kilograms (10 pounds) per hour. Where: "E" is the allowable sulfur emission in kilograms (pounds) per hour. "P" is the total feed sulfur in kilograms (pounds) per hour. SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.	Not Applicable – No sulfur bearing materials processed (excluding fuel)	
SIP 445.746 - (Federally Enforceable SIP Requirement) Other Sulfur Emitting Processes SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.		Emergency generator engine covered by SIP Article 8.1 and 8.2	

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>NAC 445B.22017 (State Only Requirement)</u> <u>Maximum Opacity of Emissions</u> 1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.2203, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods: (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). 2. The provisions of this section and NAC 445B.2202 and 445B.2203 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.	Visual checks for visual emissions during engine operation. EPA Method 9 upon request if visible emissions observed.		In Compliance
<u>SIP 445.721 (Federally Enforceable SIP Requirement)</u> <u>Visible Emissions from Stationary Sources</u> These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.		Visual checks for visual emissions during engine operation. EPA Method 9 upon request if visible emissions observed.	In Compliance

**COMBUSTION EQUIPMENT
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 – Equipment Description

- a. Type of equipment Firewater Pump Engine
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number S2.005
- e. Date equipment manufactured: TBD
- f. Please check one:
 Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,439 meters N; 746,638 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 40 W 40 H 30

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 – Design Rate/Operating Parameters

- a. **Maximum** design horsepower **OUTPUT** (horsepower per hour) 284
(Please provide for internal combustion engines only)
- b. **Maximum** design heat **INPUT** (million Btu per hour) 2.41
(Please provide for all combustion units except for internal combustion engines)
- c. *Requested operating time: time of day 0000 to 2400

Hours per day 24 Days per year Hours per year 100

*Note: Please complete if other than the maximum hours of operation (24 hours per day, 8760 hours per year), are being requested. The permit will be limited to these values.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 3 – Fuel Usage

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btu's)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	gallons				
Distillate Fuel Oil	17.6 gallons	137,000 Btu/gal	Neg.	0.0015 wt. %	Neg.
Gasoline	gallons				
Propane	cubic feet				
Natural Gas	cubic feet				
*Waste Oil	gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal – Specify Type(s)								

If more than one type of fuel is combusted, under this operating scenario, please specify primary fuel and percentage on a maximum hourly and annual basis. If fuel blending is the primary fuel, identify percentages of each fuel blended. Attach additional information to this form if necessary.

*Firing of waste oil will require multi-metals test to ensure fuel is non-hazardous.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 4 – Pollution Control Equipment/Exhaust Stack Parameters. This section must be completed.

-Complete for emissions exhausting through a stack, chimney or vent: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify “uncontrolled” if no pollution control device is installed)	Uncontrolled	
Pollutant(s) Controlled	None	
Manufacturer	NA	
Manufacturer's Guarantee (see Note 1)	NA	
Stack height (feet from ground level)	30.0	
Stack inside diameter (feet)	0.6	
Temperature (°F) at design capacity	900	
Stack exit velocity (feet per second)	74.57 (w/o raincap)	
Gas volume flow rate: actual cubic feet per minute	1265	
Gas volume flow rate: dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	RAINCAP	

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 5 – Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

The hours of operation for the FWP engine will be recorded in a logbook and maintained onsite.

Section 6 – Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

1. At all times, including startup and shutdown, the emission unit will be operated in a manner consistent with good air pollution control practices.
2. Engine operational parameters will be monitored in accordance with manufacturer's recommendations and/or in accordance with the facility's operations and maintenance procedures.

**COMBUSTION EQUIPMENT
APPLICATION FORM
CONTINUED**

Section 7 – Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.09	0.005	See emission calculations in Appendix 5
Particulates as PM ₁₀	0.09	0.005	See emission calculations in Appendix 5
Sulfur Dioxide	0.004	0.0002	See emission calculations in Appendix 5
Carbon Monoxide	1.63	0.08	See emission calculations in Appendix 5
Oxides of Nitrogen	1.88	0.09	See emission calculations in Appendix 5
Volatile Organic Compounds	See Note 1	See Note 1	See emission calculations in Appendix 5
Lead	2.2E-05	1.1E-06	See emission calculations in Appendix 5
<hr/>			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Total HAPs	1.56E-02	7.6E-04	See emission calculations in Appendix 5
Max. Individual HAP	6.22E-03	3.1E-04	See emission calculations in Appendix 5
Other Regulated Pollutants (Specify ²)			
Annual emissions are based on maximum operation of 100 hours/year			
Note 1: Emission standards for this engine is based on EPA Tier standards, which are based on a combination of NO _X +NMHC; therefore, VOC emissions have been included in NO _X total which provides a conservative NO _X emission rate that is used in the dispersion modeling.			

*Note: Alternative emissions limitations (e.g., lb/MMBu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (<i>State Only Requirement</i>)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{-0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. 	<p>SIP 445.731(1)(a) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" data-bbox="791 95 938 2021"> <thead> <tr> <th data-bbox="791 95 856 2021">Heat input in millions of BTU/hour</th> <th data-bbox="856 95 938 2021">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td data-bbox="856 95 889 2021">Up to and including 10</td> <td data-bbox="889 95 938 2021">..... 0.600</td> </tr> <tr> <td data-bbox="889 95 922 2021">100</td> <td data-bbox="922 95 938 2021">..... 0.352</td> </tr> <tr> <td data-bbox="922 95 954 2021">1,000</td> <td data-bbox="954 95 971 2021">..... 0.206</td> </tr> <tr> <td data-bbox="954 95 987 2021">10,000</td> <td data-bbox="987 95 1003 2021">..... 0.091</td> </tr> <tr> <td data-bbox="987 95 1019 2021">100,000</td> <td data-bbox="1019 95 1036 2021">..... 0.025</td> </tr> </tbody> </table>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10 0.600	100 0.352	1,000 0.206	10,000 0.091	100,000 0.025	<p>Exemption based on NAC 445B.288(2)(g)(1)</p>	
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10 0.600														
100 0.352														
1,000 0.206														
10,000 0.091														
100,000 0.025														
<p>SIP 445.731(1)(b) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{-0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p>	<p>SIP 445.731(1)(c) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{-0.568}$</p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p>	<p>Not Applicable – FWP engine is less than 4,000 MM Btu/hr</p>													
<p>SIP 445.731(3) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>		<p>Not Applicable - FWP engine is less than 4 MM Btu/hr</p>													

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
Emissions of Particulate Matter - Sources Not Otherwise Limited NAC 445B.22033, 445B.22027 <i>[State Only Requirement]</i>	1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM_{10} to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. 2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 4.10P^{0.67}$ 3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 55P^{0.11} - 40$ 4. For the purposes of subsections 2 and 3: (a) "E" means the maximum rate of emission in pounds per hour. (b) "P" means the maximum allowable throughput in tons per hour.	Not Applicable	
SIP 445.732 - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.	Not Applicable	
SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: $E = 0.0193P^{0.67}$ ($4.10P^{0.67}$) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
SIP 445.732 (3) - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources	When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: $E = 11.78P^{0.11} \cdot 18.14 \cdot (55P^{0.11} - 40)$ "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.	Not Applicable	
NAC 445B.2204, 445B.22043, 445B.22047 <i>[State Only Requirement]</i> Sulfur Emissions - Fuel Burning Equipment	1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$ 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: Liquid fuel, $Y = 0.4X$ Solid Fuel, $Y = 0.6X$ Combination, $Y = (L(0.4) - S(0.6))/(L + S)$	Not Applicable – FWP engine is less than 250 MMBtu/hr	
4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.			
5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.			

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
SIP Article 8.1 and 8.2 (Federally Enforceable SIP Requirement) Sulfur Emissions - Fuel Burning Equipment 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$ "X" = Operating heat input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.	SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: Liquid Fuel Solid Fuels $Y = 0.7X \quad (Y = 0.4X)$ $Y = 1.1X \quad (Y = 0.6X)$ Combination Fuel $Y = \frac{L(0.7) + S(1.1)}{L+S}$ "X" = Operating input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour. "L" = Percentage of total heat input derived from liquid fuel. "S" = Percentage of total heat input derived from solid fuel.	Not Applicable – FWP engine is less than 250 MMBtu/hr	In compliance – compliance based on use of low-sulfur distillate fuel oil. SO ₂ emissions are less than 1.69 lbs/hr
NAC 445B.2204, 445B.22043, 445B.22025 (State Only Requirement) Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.	SIP 445.746 - (Federally Enforceable SIP Requirement) Other Sulfur Emitting Processes SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation: $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ When • E • is equal to or greater than 5 kilograms (10 pounds) per hour. Where: "E" is the allowable sulfur emission in kilograms (pounds) per hour, "P" is the total feed sulfur in kilograms (pounds) per hour. SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.	Not Applicable – No sulfur bearing materials processed (excluding fuel)	
SIP 445.746 - (Federally Enforceable SIP Requirement) Other Sulfur Emitting Processes SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.	FWP engine covered by SIP Article 8.1 and 8.2		

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>NAC 445B.22017 (State Only Requirement)</u> <u>Maximum Opacity of Emissions</u> 1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.2203, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods: (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). 2. The provisions of this section and NAC 445B.2202 and 445B.2203 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption. <u>SIP 445.721 (Federally Enforceable SIP Requirement)</u> <u>Visible Emissions from Stationary Sources</u> These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.	Visual checks for visual emissions during engine operation. EPA Method 9 upon request if visible emissions observed.	Visual checks for visual emissions during engine operation. EPA Method 9 upon request if visible emissions observed.	In Compliance

**INDUSTRIAL PROCESS
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Coal Transfer Building
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number S2.006
- e. Date equipment manufactured: TBD
- f. Please check one:
 Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. For crushers: size output setting, check one:
 Primary ($\geq 4"$)
 Secondary ($< 4" \text{ but } \geq 1"$)
 Tertiary ($< 1"$)
- h. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- i. UTM Coordinates 4,091,501 meters N; 746,745 meters E; Zone 12
(Please specify NAD 27 or NAD 83) Location identified is SW corner
- j. Basic equipment dimensions (feet): L 60 W 60 H 95

*The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design capacity (tons per hour) 5,000 tons/hour
- b. Requested operating rate (tons per hour) 5,000 tons/hour
- c. Requested operating time: (time of day)* _____ to _____
Hours per day 24 Hours per year 8760 hours/year
- d. Batch load or charge weight (tons) (if applicable) N/A
- e. Total hours required to process batch or charge (if applicable) N/A
- f. Maximum operating rate (tons per year) 2,944,000 tons/year
- g. Requested operating rate (tons per year)* 2,944,000 tons/year
- f. Type of material processed coal
- g. Minimum moisture content 19.42%

*Note: Please complete if other than the maximum design capacity (tons per hour and tons per year) and/or the maximum hours of operation (24 hours per day, 8760 hours per year) are being requested. The permit will be limited to these values.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 3 - Fuel Usage

(This section only applies to fuel consumed/combusted within the process unit. Fuels consumed/combusted in combustion units are to be listed on the Combustion Equipment Application Form.)

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	gallons				
	Gallons				
Gasoline	Gallons				
Propane	cubic feet				
Natural Gas	cubic feet				Not Applicable
*Waste Oil	Gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s)					Not Applicable			

If more than one type of fuel is combusted, under this operating scenario please specify primary fuel and percentage on a maximum hourly and annual basis (if fuel blending is the primary fuel, identify percentages of each fuel blended). Attach additional information to this form if necessary.

*Firing of waste oil will require multi metals test to insure fuel is non-hazardous.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment/Exhaust Stack Parameters (this section must be completed)

-Complete for emissions **exhausting through a stack, chimney or vent**: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	Baghouse	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.005 gr/dscf	
Stack height (feet from ground level)	105	
Stack inside diameter (feet)	2.5	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	57.73	
Gas volume flow rate: Actual cubic feet per minute	10,000	
Gas volume flow rate: Dry standard cubic feet per minute	8,833	
Unusual stack charac- teristics (e.g. raincap, horizontal discharge)	n/a	

-Complete for emissions **not** exhausting through a stack, chimney or vent: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)		
Pollutant(s) Controlled		
Manufacturer		
Manufacturer's Guarantee (see Note 1)		
Note: Indicate the specific point(s) of emission control application for this emission unit. This must be provided as part of the process flow diagram as required in section 7 of the General Information section of the application form.		

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

Ensure baghouse is operating during coal unloading/transfer activities. Monitor baghouse ΔP readings during unloading/transfer activities. Check for visible emissions during unloading/transfer activities.

Per NSPS Subpart Y, conduct an initial performance test consisting of a Method 9 opacity reading following procedures in §60.11.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.38	1.66	See emission calculations in Appendix 5
Particulates as PM ₁₀	0.38	1.66	See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status															
NAC 445B:2203 (State Only Requirement) Emissions of Particulate Matter - Fuel Burning Equipment 1. Source may not cause or permit the emission of PM ₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas: <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X_{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X_{0.568}$ 2. For the purposes of paragraphs b and c of subsection 1: <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. 	Not Fuel burning Equipment																	
SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement)																		
Particulate Matter - Fuel Burning Equipment Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:	Maximum allowable emission of particulate matter in pounds per hour per million BTU/hour <table> <tr><td>Up to and including 10</td><td>.....</td><td>0.600</td></tr> <tr><td>100</td><td>.....</td><td>0.352</td></tr> <tr><td>1,000</td><td>.....</td><td>0.206</td></tr> <tr><td>10,000</td><td>.....</td><td>0.091</td></tr> <tr><td>100,000</td><td>.....</td><td>0.025</td></tr> </table>	Up to and including 10	0.600	100	0.352	1,000	0.206	10,000	0.091	100,000	0.025	Not Fuel Burning Equipment	
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100	0.352																
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SIP 445.731(3) - (Federally Enforceable SIP Requirement)																		
Particulate Matter - Fuel Burning Equipment Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.		Not Fuel Burning Equipment																

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22033, 445B.22027 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Sources Not Otherwise Limited</p> <p>1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.</p> <p>2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:</p> $E = 4.10P^{0.67}$ <p>3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:</p> $E = 55P^{0.11} - 40$ <p>4. For the purposes of subsections 2 and 3:</p> <p>(a) "E" means the maximum rate of emission in pounds per hour.</p> <p>(b) "P" means the maximum allowable throughput in tons per hour.</p>	<p>SIP 445.732 - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.</p> <p>SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:</p> $E = 0.0193P^{0.67} (4.10P^{0.67})$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour.</p> <p>"P" = Process weight rate in kilograms (tons) per hour.</p>	<p>SIP 445.732 (3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:</p> $E = 11.78P^{0.11} - 18.14 (55P^{0.11} - 40)$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour.</p> <p>"P" = Process weight rate in kilograms (tons) per hour.</p>	<p>In compliance E < 86.9 lbs/hr Proposed Limit = 0.38 lbs/hr</p> <p>In compliance E < 86.9 lbs/hr Proposed Limit = 0.38 lbs/hr</p>

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.2204, 445B.22043, 445B.22047 (<i>State Only Requirement</i>)</p> <p>Sulfur Emissions - Fuel Burning Equipment</p> <ol style="list-style-type: none"> Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$ Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: $\text{Liquid fuel, } Y = 0.4X$ $\text{Solid Fuel, } Y = 0.6X$ $\text{Combination, } Y = (L(0.4) - S(0.6))/(L + S)$ For the purposes of subsections 2 and 3: <ol style="list-style-type: none"> "X" means the operating input of heat in millions of Btu's per hour. "Y" means the allowable rate of emission of sulfur in pounds per hour. For the purposes of subsection 3: <ol style="list-style-type: none"> "L" means the percentage of total input of heat derived from liquid fuel. "S" means the percentage of total heat derived from solid fuel. <p>SIP Article 8.1 and 8.2 (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Sulfur Emissions - Fuel Burning Equipment</p>	<p>1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3.</p> <p>2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$</p> <p>3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: $\text{Liquid fuel, } Y = 0.4X$ $\text{Solid Fuel, } Y = 0.6X$ $\text{Combination Fuel, } Y = (L(0.4) - S(0.6))/(L + S)$</p> <p>4. For the purposes of subsections 2 and 3: <ol style="list-style-type: none"> "X" means the operating input of heat in millions of Btu's per hour. "Y" means the allowable rate of emission of sulfur in pounds per hour. </p> <p>5. For the purposes of subsection 3: <ol style="list-style-type: none"> "L" means the percentage of total input of heat derived from liquid fuel. "S" means the percentage of total heat input derived from solid fuel. </p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$</p> <p>"X" = Operating heat input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.</p> <p>8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p> <p>Liquid Fuel $Y = 0.7X \quad (Y = 0.4X)$</p> <p>Solid Fuel $Y = 1.1X \quad (Y = 0.6X)$</p> <p>Combination Fuel $Y = \frac{L(0.7) + S(1.1)}{L + S}$</p> <p>"X" = Operating input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour. "L" = Percentage of total heat input derived from liquid fuel. "S" = Percentage of total heat input derived from solid fuel.</p> <p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p> <p>NAC 445B.2204, 445B.22043, 445B.2205 (<i>State Only Requirement</i>)</p> <p>Other Processes Which Emit Sulfur</p> <ol style="list-style-type: none"> Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ For the purposes of subsection 1: <ol style="list-style-type: none"> "E" means the allowable sulfur emission in pounds per hour. "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour. 	<p>Not Fuel Burning Equipment</p>	<p>Not Fuel Burning Equipment</p>

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.746 - <i>(Federal Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} / (0.292P^{0.904})$ <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) – When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p> <p>SIP 445.746 - <i>(Federal Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(3) – When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p> <p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p><u>Maximum Opacity of Emissions</u></p> <ol style="list-style-type: none"> 1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods: <ol style="list-style-type: none"> (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A, of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). 2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption. <p>SIP 445.721 <i>(Federal Enforceable SIP Requirement)</i></p> <p><u>Visible Emissions from Stationary Sources</u></p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p> <p>40 CFR 60.250 – NSPS Subpart Y</p> <p><u>Standards of Performance for Coal Preparation Plants</u></p> <p>The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems. Any facility that commences construction or modification after October 24, 1974, is subject to the requirements of this subpart.</p> <p>§60.252(c) – On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.</p>	<p>Not sulfur emitting process</p>	<p>Observation of visible emissions in accord with approved protocol</p>	<p>In Compliance</p>

**INDUSTRIAL PROCESS
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Coal Crusher Building [See Attached Equipment List]
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number S2.007
- e. Date equipment manufactured: TBD
- f. Please check one:
 Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. For crushers: size output setting, check one:
 Primary ($\geq 4"$)
 Secondary ($< 4" \text{ but } \geq 1"$)
 Tertiary ($< 1"$)
- h. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- i. UTM Coordinates 4,091,549 meters N; 746,705 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- j. Basic equipment dimensions (feet): L [See Attached] W [See Attached] H [See Attached]

*The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design capacity (tons per hour) 3,000 tons/hour
- b. Requested operating rate (tons per hour) 3,000 tons/hour
- c. Requested operating time: (time of day)* _____ to _____
Hours per day _____ Hours per year _____
- d. Batch load or charge weight (tons) (if applicable) N/A
- e. Total hours required to process batch or charge (if applicable) N/A
- f. Maximum operating rate (tons per year) 2,944,000 tons/year
- g. Requested operating rate (tons per year)* 2,944,000 tons/year
- f. Type of material processed coal
- g. Minimum moisture content 19.42%

*Note: Please complete if other than the maximum design capacity (tons per hour and tons per year) and/or the maximum hours of operation (24 hours per day, 8760 hours per year) are being requested. The permit will be limited to these values.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 3 - Fuel Usage

(This section only applies to fuel consumed/combusted within the process unit. Fuels consumed/combusted in combustion units are to be listed on the Combustion Equipment Application Form.)

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	Gallons				
	Gallons				
Gasoline	Gallons				
Propane	cubic feet				
Natural Gas	cubic feet				Not Applicable
*Waste Oil	Gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s) Not Applicable								

If more than one type of fuel is combusted, under this operating scenario please specify primary fuel and percentage on a maximum hourly and annual basis (if fuel blending is the primary fuel, identify percentages of each fuel blended). Attach additional information to this form if necessary.

*Firing of waste oil will require multi metals test to insure fuel is non-hazardous.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment/Exhaust Stack Parameters (this section must be completed)

-Complete for emissions **exhausting through a stack, chimney or vent**: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	Baghouse	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.005 gr/dscf	
Stack height (feet from ground level)	152	
Stack inside diameter (feet)	2.1	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	52.38	
Gas volume flow rate: Actual cubic feet per minute	10,000	
Gas volume flow rate: Dry standard cubic feet per minute	8,833	
Unusual stack charac- teristics (e.g. raincap, horizontal discharge)	n/a	

-Complete for emissions **not** exhausting through a stack, chimney or vent: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)		
Pollutant(s) Controlled		
Manufacturer		
Manufacturer's Guarantee (see Note 1)		
Note: Indicate the specific point(s) of emission control application for this emission unit. This must be provided as part of the process flow diagram as required in section 7 of the General Information section of the application form.		

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

Per NSPS Subpart Y, conduct an initial performance test consisting of a Method 9 opacity reading following procedures in §60.11. O&M baghouse checks and daily ΔP recordings.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.38	1.66	See emission calculations in Appendix 5
Particulates as PM ₁₀	0.38	1.66	See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

**Toquop Energy, LLC
Toquop Energy Project**

Client Equip #	Description	Horizontal LGTH (ft)			Dust Control Mechanism	
		TPH (stph)	Belt Width (in)	LIFT (ft)		
Crusher Feed Conveyor (ID-1C3)	Coal Crusher Feed Conveyor	2000	60	350	150	Baghouse
Coal Crusher Building	Coal Crusher Building	NA	NA	NA	NA	Baghouse
Surge Bin		250 ton	NA	NA	NA	Baghouse
Belt Feeder		N/A	0	0	0	Baghouse
Coal Crusher		2000	0	0	0	Baghouse

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B:2203 (State Only Requirement) Emissions of Particulate Matter - Fuel Burning Equipment 1. Source may not cause or permit the emission of PM ₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas: <ol style="list-style-type: none"> For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X_{-0.231}$ For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X_{-0.568}$ 2. For purposes of paragraphs b and c of subsection 1: <ol style="list-style-type: none"> "X" means the operating rate in million Btu's per hour. "Y" means the allowable rate of emission in pounds per million Btu's. 	Not Fuel burning Equipment		
SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:	Heat input in millions of BTU/hour Up to and including 10 0.600 100 0.352 1,000 0.206 10,000 0.091 100,000 0.025	Not Fuel Burning Equipment	
SIP 445.731(1)(b) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X_{-0.231}$ Where "X" = maximum equipment capacity rate in million Btu's per hour. $"Y" = \text{allowable rate of emission in pounds per million Btu's.}$	Maximum allowable emission of particulate matter in pounds per hour per million Btu's	Not Fuel Burning Equipment	
SIP 445.731(1)(c) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X_{-0.568}$ where "X" = maximum equipment capacity rate in million Btu's per hour. $"Y" = \text{allowable rate of emission in pounds per million Btu's.}$	Not Fuel Burning Equipment		
SIP 445.731(3) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.	Not Fuel Burning Equipment		

SECTION 8

EMISSION UNIT SPECIFIC APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22033, 445B.22027 (<i>State Only Requirement</i>)</p> <p>Emissions of Particulate Matter - Sources Not Otherwise Limited</p> <p>1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.</p> <p>2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 4.10P^{0.67}</p> <p>3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 55P^{0.11} - 40</p> <p>4. For the purposes of subsections 2 and 3:</p> <p>(a) "E" means the maximum rate of emission in pounds per hour.</p> <p>(b) "P" means the maximum allowable throughput in tons per hour.</p>		Monitor baghouse pressure drop in accord with approved protocol	In compliance E < 86.9 lbs/hr Proposed Limit = 0.38 lbs/hr
<p>SIP 445.732 - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Industrial Sources</p> <p>Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.</p> <p>SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: $E = 0.0193P^{0.67} (4.10P^{0.67})$ </p> <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p>	<p>Process Rate is greater than 60,000 pound per hour $P = 2,000 \text{ tons}/\text{hour}$</p>		
<p>SIP 445.732(3) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Industrial Sources</p> <p>When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: $E = 11.78P^{0.11} - 13.14 (55P^{0.11} - 40)$ </p> <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p>		Monitor baghouse pressure drop in accord with approved protocol	In Compliance E < 86.9 lbs/hr Proposed Limit = 0.38 lbs/hr
<p>NAC 445B.2204, 445B.22013, 445B.22047 (<i>State Only Requirement</i>)</p> <p>Sulfur Emissions - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3.</p> <p>2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: Y = 0.7X</p> <p>3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation:</p> <p>Liquid fuel, Y = 0.4X Solid Fuel, Y = 0.6X Combination, Y = $(L(0.4) - S(0.6))/(L + S)$</p> <p>4. For the purposes of subsections 2 and 3:</p> <p>(a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.</p> <p>5. For the purposes of subsection 3:</p> <p>(a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.</p>	<p>Not Fuel Burning Equipment</p>		

SECTION 8

EMISSION UNIT SPECIFIC APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
SIP Article 8.1 and 8.2 (<i>Federally Enforceable SIP Requirement</i>) Sulfur Emissions - Fuel Burning Equipment 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$ "X" = Operating heat input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.	Not Fuel Burning Equipment		
SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: 8.2.2.1 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted. NAC 445B.2204, 445B.2204.3, 445B.2205 (<i>State Only Requirement</i>) Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.	Not Fuel Burning Equipment		
SIP 445.746 - (<i>Federally Enforceable SIP Requirement</i>) Other Sulfur Emitting Processes SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation: $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ Where: "E" is the allowable sulfur emission in kilograms (pounds) per hour. "P" is the total feed sulfur in kilograms (pounds) per hour. SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.	Not sulfur emitting process		
SIP 445.746 - (<i>Federally Enforceable SIP Requirement</i>) Other Sulfur Emitting Processes SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.	Not sulfur emitting process		

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>NAC 445B.22017 (State Only Requirement)</u> Maximum Opacity of Emissions Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods: (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). 2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption. <i>SIP 445.721 (Federally Enforceable SIP Requirement)</i> Visible Emissions from Stationary Sources These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.		Observation of visible emissions in accord with approved protocol	In Compliance
40 CFR 60.250 – NSPS Subpart Y Standards of Performance for Coal Preparation Plants. The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems. Any facility that commences construction or modification after October 24, 1974, is subject to the requirements of this subpart. §60.252(c) – On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.		Performance testing will be conducted in accord with §60.8, and Method 9 and the procedures in §60.11 will be used to determine opacity.	In Compliance

**INDUSTRIAL PROCESS
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Tripper Deck House/Tripper Conveyor [See Attached Equipment List]
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number S2.008
- e. Date equipment manufactured: TBD
- f. Please check one:
 Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. For crushers: size output setting, check one:
 Primary ($\geq 4"$)
 Secondary ($< 4" \text{ but } \geq 1"$)
 Tertiary ($< 1"$)
- h. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- i. UTM Coordinates 4,091,437 meters N; 746,709 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- j. Basic equipment dimensions (feet): L [See Attached] W [See Attached] H [See Attached]

*The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design capacity (tons per hour) 3,000 tons/hour
- b. Requested operating rate (tons per hour) 3,000 tons/hour
- c. Requested operating time: (time of day)* _____ to
Hours per day _____ Hours per year _____
- d. Batch load or charge weight (tons) (if applicable) N/A
- e. Total hours required to process batch or charge (if applicable) N/A
- f. Maximum operating rate (tons per year) 2,944,000 tons/year
- g. Requested operating rate (tons per year)* 2,944,000 tons/year
- f. Type of material processed coal
- g. Minimum moisture content 19.42%

*Note: Please complete if other than the maximum design capacity (tons per hour and tons per year) and/or the maximum hours of operation (24 hours per day, 8760 hours per year) are being requested. The permit will be limited to these values.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 3 - Fuel Usage

(This section only applies to fuel consumed/combusted within the process unit. Fuels consumed/combusted in combustion units are to be listed on the Combustion Equipment Application Form.)

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	gallons				
	Gallons				
Gasoline	Gallons				
Propane	cubic feet				
Natural Gas	cubic feet				Not Applicable
*Waste Oil	Gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s)								

If more than one type of fuel is combusted, under this operating scenario please specify primary fuel and percentage on a maximum hourly and annual basis (if fuel blending is the primary fuel, identify percentages of each fuel blended). Attach additional information to this form if necessary.

*Firing of waste oil will require multi metals test to insure fuel is non-hazardous.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment/Exhaust Stack Parameters (this section must be completed)

-Complete for emissions **exhausting through a stack, chimney or vent**: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	Baghouse	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.005 gr/dscf	
Stack height (feet from ground level)	270	
Stack inside diameter (feet)	4.0	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	53.04	
Gas volume flow rate: Actual cubic feet per minute		
Gas volume flow rate: Dry standard cubic feet per minute	11,667	
Unusual stack charac- teristics (e.g. raincap, horizontal discharge)	n/a	

-Complete for emissions **not** exhausting through a stack, chimney or vent: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)		
Pollutant(s) Controlled		
Manufacturer		
Manufacturer's Guarantee (see Note 1)		
Note: Indicate the specific point(s) of emission control application for this emission unit. This must be provided as part of the process flow diagram as required in section 7 of the General Information section of the application form.		

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

Per NSPS Subpart Y, conduct an initial performance test consisting of a Method 9 opacity reading following procedures in §60.11. O&M Baghouse checks and daily ΔP recordings.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.50	2.19	See emission calculations in Appendix 5
Particulates as PM ₁₀	0.50	2.19	See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

**Toquop Energy, LLC
Toquop Energy Project**

Tripper Deck House / Tripper Conveyor

Client Equip #	Description	Horizontal			LIFT	Dust Control Mechanism
		TPH (stph)	Belt Width (in)	LGTH (ft)	(ft)	
Coal Feed Conveyor (ID-1C6)	Tripper House Feed Conveyor	2000	60	1350	215	Enclosed w/ wlk wy
Coal Feed Conveyor (ID-1C6)	Tripper House Feed Conveyor	2000	60	1350	215	Enclosed w/ wlk wy
Surge Bin	Tripper Deck Surge Bin	N/A	NA	NA	NA	Baghouse
Belt Feeder	Tripper Deck Belt Feeder	2000	60	20	0	Baghouse
Tripper Conveyor	Tripper House Conveyor	2000	60	550	0	Baghouse
Tripper	Coal House Tripper	2000	NA	NA	NA	Baghouse
Coal Silos/Bowl Mills	Boiler Coal Storage Silos (5 coal silos)	750 tons each	NA	NA	NA	Baghouse

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ol style="list-style-type: none"> For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ol style="list-style-type: none"> "X" means the operating rate in million Btu's per hour. "Y" means the allowable rate of emission in pounds per million Btu's. 	Not Fuel burning Equipment														
<p>SIP 445.731((1)(a) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" data-bbox="833 1094 997 1833"> <tr> <td>Heat input in millions of BTU/hour</td> <td>Maximum allowable emission of particulate matter in pounds per hour per million</td> </tr> <tr> <td>Up to and including 10</td> <td>0.600</td> </tr> <tr> <td>100</td> <td>0.352</td> </tr> <tr> <td>1,000</td> <td>0.206</td> </tr> <tr> <td>10,000</td> <td>0.091</td> </tr> <tr> <td>100,000</td> <td>0.025</td> </tr> </table>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10	0.600	100	0.352	1,000	0.206	10,000	0.091	100,000	0.025	Not Fuel Burning Equipment		
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10	0.600														
100	0.352														
1,000	0.206														
10,000	0.091														
100,000	0.025														
<p>SIP 445.731((1)(b) - (Federally Enforceable SIP Requirement)</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p>	Not Fuel Burning Equipment														
<p>SIP 445.731((1)(c) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{0.568}$</p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p>	Not Fuel Burning Equipment														
<p>SIP 445.731((3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	Not Fuel Burning Equipment														

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B.22033, 445B.22027 (State Only Requirement) Emissions of Particulate Matter - Sources Not Otherwise Limited <p>1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.</p> <p>2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 4.10P^{0.67}</p> <p>3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 55P^{0.11} - 40</p> <p>4. For the purposes of subsections 2 and 3:</p> <p>(a) "E" means the maximum rate of emission in pounds per hour.</p> <p>(b) "P" means the maximum allowable throughput in tons per hour.</p>		Monitor baghouse pressure drop in accord with approved protocol	In compliance E < 86.9 lbs/hr Proposed Limit = 0.50 lbs/hr
SIP 445.732 - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.	Process Rate is greater than 60,000 pound per hour P= 2,000 tons/hour		
SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: E = 0.0193P ^{0.67} (4.10P ^{0.67}) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.		Monitor baghouse pressure drop in accord with approved protocol	In Compliance E < 86.9 lbs/hr Proposed Limit = 0.50 lbs/hr
SIP 445.732(3) - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: E = 11.78P ^{0.11} 13.14 (55P ^{0.11} - 40) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement) Sulfur Emissions - Fuel Burning Equipment Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: Y = 0.7X 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: Liquid fuel, Y = 0.4X Solid Fuel, Y = 0.6X Combination, Y = (L(0.4) - S(0.6))/(L + S)	Not Fuel Burning Equipment		
4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour. 5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.			

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
SIP Article 8.1 and 8.2 (Federally Enforceable SIP Requirement) Sulfur Emissions - Fuel Burning Equipment 8.2.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$ "X" = Operating heat input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.	Not Fuel Burning Equipment		
SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: $\frac{\text{Liquid Fuel}}{Y = 0.7X \quad (Y = 0.4X)} \quad \frac{\text{Solid Fuels}}{Y = 1.1X \quad (Y = 0.6X)}$ $\frac{\text{Combination Fuel}}{Y = \frac{L(0.7) + S(1.1)}{L + S}}$ "X" = Operating input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour. "L" = Percentage of total heat input derived from liquid fuel. "S" = Percentage of total heat input derived from solid fuel.	Not Fuel Burning Equipment		
8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted. NAC 445B.2204, 445B.2204.3, 445B.2205 (State Only Requirement) Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.	Not sulfur emitting process		
SIP 445.746 - (Federally Enforceable SIP Requirement) Other Sulfur Emitting Processes SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation: $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ When • E• is equal to or greater than 5 kilograms (10 pounds) per hour. Where: "E" is the allowable sulfur emission in kilograms (pounds) per hour, "P" is the total feed sulfur in kilograms (pounds) per hour. SIP 445.746(1) – When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.	Not sulfur emitting process		
SIP 445.746 - (Federally Enforceable SIP Requirement) Other Sulfur Emitting Processes SIP 445.746(3) – When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.	Not sulfur emitting process		

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22017 (<i>State Only Requirement</i>)</p> <p>Maximum Opacity of Emissions</p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <p>(a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.</p> <p>(b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).</p> <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p> <p>SIP 445.721 (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Visible Emissions from Stationary Sources</p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p> <p>40 CFR 60.250 – NSPS Subpart Y</p> <p>Standards of Performance for Coal Preparation Plants</p> <p>The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems. Any facility that commences construction or modification after October 24, 1974, is subject to the requirements of this subpart.</p> <p>§60.252(c) – On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.</p>	<p>Observation of visible emissions in accord with approved protocol</p> <p>Observation of visible emissions in accord with approved protocol</p> <p>Performance testing will be conducted in accord with §60.8, and Method 9 and the procedures in §60.11 will be used to determine opacity.</p>	<p>In Compliance</p> <p>In Compliance</p> <p>In Compliance</p>	

**STORAGE SILO
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Bottom Ash Silo
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment _____ TBD
- d. Model number TBD Serial number TBD *Equip. number S2.009 / PF1.012
- e. Date equipment manufactured: TBD
- f. Please check one: Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,250 meters N: 746,669 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 30 W 30 H 80

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design storage capacity (tons) 1700 (10-day supply)
- b. Maximum loading rate (tons per hour) 15 Loading time (hours to fill) _____
- c. *Requested loading rate (tons per hour): _____
 *Hours per day _____ Days per year _____ Hours per year _____
- d. Maximum unloading rate (pounds per hour) 20,000
- e. Method of unloading (screw auger, etc.) rotary feeder
- f. Continuous or batch discharge continuous
- g. Requested unloading rate (tons per hour) 15
 Requested unloading rate (tons per year) 60,500
- h. Requested unloading time: Hours per day 24 Time of day _____ to _____
 Hours per day 24 Days per year 365 Hours per year 8760
- i. Material type processed (lime, cement, flyash, etc.) Bottom Ash

*Note: Please complete if other than the maximum loading rate (tons per hour), and/or the maximum hours of operation (24 hours per day, 8,760 hours per year), are being requested. The permit will be limited to these values.

Section 3 –Reserved

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (this section must be completed)

-Complete for emissions exhausting through a silo stack, chimney or vent during silo loading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.01 gr/dscf	
Stack height (feet from ground level)	82.0	
Stack inside diameter (feet)	1.1	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	58.34	
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute	3500	
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	n/a	

-Complete for emissions exhausting through a silo stack, chimney or vent during silo unloading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.01 gr/dscf	
Stack height (feet from ground level)	82.0	
Stack inside diameter (feet)	1.1	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	58.34	
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute	3500	
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	n/a	

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (continued)

-Complete for emissions not exhausting through a stack during silo unloading process: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify "uncontrolled" if no pollution control device is installed)	uncontrolled	
Pollutant(s) Controlled	n/a	
Manufacturer		
Manufacturer's Guarantee (see Note 1)		

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

O&M bin vent filter checks and daily ΔP readings.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits - Silo Loading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.30	1.31	Emissions from the bottom ash silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	0.30	1.31	Emissions from the bottom ash silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. §§ 7671-8671q, inclusive.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 (continued) - Requested Emission Limits - Silo Unloading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.30 (note 1)	1.31 (note 1)	Emissions from the bottom ash silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	0.30 (note 1)	1.31 (note 1)	Emissions from the bottom ash silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

Note 1: Toquop Energy, LLC wants the option to be able to discharge material directly from the bottom ash silo into trucks for transport via bottom dump rather than through a dustless unloader. Therefore, emissions from an additional process fugitive discharge point (PF1.012) have been calculated of 0.35 lb/hr and 0.03 ton/yr. These emissions were also included in the dispersion modeling in addition to the emissions identified above.

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. 	Not Fuel Burning Equipment														
<p>SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" data-bbox="796 1100 972 1826"> <thead> <tr> <th data-bbox="796 1100 850 1826">Heat input in millions of BTU/hour</th> <th data-bbox="850 1100 972 1826">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td data-bbox="850 1100 882 1826">Up to and including 10</td> <td data-bbox="882 1100 915 1826">0.600</td> </tr> <tr> <td data-bbox="882 1100 915 1826">100</td> <td data-bbox="915 1100 948 1826">0.352</td> </tr> <tr> <td data-bbox="915 1100 948 1826">1,000</td> <td data-bbox="948 1100 980 1826">0.206</td> </tr> <tr> <td data-bbox="948 1100 980 1826">10,000</td> <td data-bbox="980 1100 1013 1826">0.091</td> </tr> <tr> <td data-bbox="1013 1100 1046 1826">100,000</td> <td data-bbox="1046 1100 1078 1826">0.025</td> </tr> </tbody> </table>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10	0.600	100	0.352	1,000	0.206	10,000	0.091	100,000	0.025	Not Fuel Burning Equipment		
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10	0.600														
100	0.352														
1,000	0.206														
10,000	0.091														
100,000	0.025														
<p>SIP 445.731(1)(b) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(1)(c) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{0.568}$</p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	Not Fuel Burning Equipment														

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
Emissions of Particulate Matter - Sources Not Otherwise Limited <u>NAC 445B.22033, 445B.22027 (State Only Requirement)</u> <ol style="list-style-type: none"> Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 4 \cdot 10^{P_{0.67}}$ When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 55P_{0.11} - 40$ For the purposes of subsections 2 and 3: <ol style="list-style-type: none"> "E" means the maximum rate of emission in pounds per hour. "P" means the maximum allowable throughput in tons per hour. 	<p>Process Rate: Fill = 15 tons/hr</p>	<p>Monitor bin vent filter pressure drop in accord with approved protocol</p>	<p>In compliance Silo loading: E= 25.16 lb/hr Proposed Limit = 0.30 lb/hr</p>
SIP 445.732(2) - (Federally Enforceable SIP Requirement) <u>Particulate Matter - Industrial Sources</u>	<p>Process Rate: Fill = 15 tons/hr</p>	<p>Monitor bin vent filter pressure drop in accord with approved protocol</p>	<p>In compliance Silo loading: E= 25.16 lb/hr Proposed Limit = 0.30 lb/hr</p>
SIP 445.732(3) - (Federally Enforceable SIP Requirement) <u>Particulate Matter - Industrial Sources</u>	<p>Not Applicable – Process Rate: Fill = 15 tons/hr</p>	<p>Not Fuel Burning Equipment</p>	

Emissions of Particulate Matter - Sources Not Otherwise Limited
NAC 445B.22033, 445B.22027 (State Only Requirement)

- Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.
- When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 4 \cdot 10^{P_{0.67}}$
- When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 55P_{0.11} - 40$
- For the purposes of subsections 2 and 3:
 - "E" means the maximum rate of emission in pounds per hour.
 - "P" means the maximum allowable throughput in tons per hour.

SIP 445.732(2) - (Federally Enforceable SIP Requirement)

Particulate Matter - Industrial Sources

Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.

SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:

$$E = 0.0193P_{0.67}^0 (4.10P_{0.67})$$

"E" = Maximum rate of emission in kilograms (pounds) per hour.

"P" = Process weight rate in kilograms (tons) per hour.

SIP 445.732(3) - (Federally Enforceable SIP Requirement)

Particulate Matter - Industrial Sources

When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:

$$E = 11.78P_{0.11} - 18.14 (55P_{0.11} - 40)$$

"E" = Maximum rate of emission in kilograms (pounds) per hour.

"P" = Process weight rate in kilograms (tons) per hour.

NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement)

Sulfur Emissions - Fuel Burning Equipment

- Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3.
- Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$
- Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation:

Liquid fuel, $Y = 0.4X$

Solid Fuel, $Y = 0.6X$

Combination, $Y = (L(0.4) - S(0.6))/(L + S)$

- For the purposes of subsections 2 and 3:
 - "X" means the operating input of heat in millions of Btu's per hour.
 - "Y" means the allowable rate of emission of sulfur in pounds per hour.
- For the purposes of subsection 3:
 - "L" means the percentage of total input of heat derived from liquid fuel.
 - "S" means the percentage of total heat derived from solid fuel.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP Article 8.1 and 8.2 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Sulfur Emissions - Fuel Burning Equipment</p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation:</p> $Y = 1.26X \quad (Y = 0.7X)$ <p>"X" = Operating heat input in millions of kg-cal (Btu's) per hour.</p> <p>"Y" = Allowable rate of sulfur emission in kg (pounds) per hour.</p>		Not Fuel Burning Equipment	
<p>SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p> $\begin{aligned} \text{Liquid Fuel} \\ Y &= 0.7X \quad (Y = 0.4X) \\ \text{Solid Fuels} \\ Y &= 1.1X \quad (Y = 0.6X) \\ \text{Combination Fuel} \\ Y &= \frac{L(0.7) + S(1.1)}{L+S} \end{aligned}$ <p>"X" = Operating input in millions of kg-cal (Btu's) per hour.</p> <p>"Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.</p> <p>"L" = Percentage of total heat input derived from liquid fuel.</p> <p>"S" = Percentage of total heat input derived from solid fuel.</p>		Not Fuel Burning Equipment	
<p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p> <p>NAC 445B.2204, 445B.2204.3, 445B.2205 <i>(State Only Requirement)</i></p> <p>Other Processes Which Emit Sulfur</p> <p>1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:</p> $E = 0.292P^{0.904}$ <p>2. For the purposes of subsection 1:</p> <ol style="list-style-type: none"> "E" means the allowable sulfur emission in pounds per hour. "P" means the total feed sulfur. 	<p>1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p>	Not sulfur emitting process	
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>		Not sulfur emitting process	

SECTION 8

EMISSION UNIT SPECIFIC

APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p>Maximum Opacity of Emissions</p> <p>1. Except as otherwise provided in this section and NAC 445B.22022 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <p>(a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.</p> <p>(b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).</p> <p>2. The provisions of this section and NAC 445B.22022 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>	<p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p>Visible Emissions from Stationary Sources</p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>	<p>Monitor bin vent filter pressure drop in accord with approved protocol</p>	<p>In Compliance</p>

**STORAGE SILO
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Fly Ash Silo
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment _____ TBD
- d. Model number TBD Serial number TBD *Equip. number S2.010 / PF1.013
- e. Date equipment manufactured: TBD
- f. Please check one: Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,266 meters N: 746,984 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 70 W 70 H 221

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design storage capacity (tons) 5,000 (10-day supply)
- b. Maximum loading rate (tons per hour) 100 Loading time (hours to fill) 15
- c. *Requested loading rate (tons per hour):

*Hours per day _____ Days per year _____ Hours per year
- d. Maximum unloading rate (pounds per hour) 400,000
- e. Method of unloading (screw auger, etc.) rotary feeder
- f. Continuous or batch discharge continuous
- g. Requested unloading rate (tons per hour) 200
Requested unloading rate (tons per year) 512,460
- h. Requested unloading time: Hours per day 24 Time of day _____ to _____

Hours per day 24 Days per year 365 Hours per year 8760
- i. Material type processed (lime, cement, flyash, etc.) Fly Ash

*Note: Please complete if other than the maximum loading rate (tons per hour), and/or the maximum hours of operation (24 hours per day, 8,760 hours per year), are being requested. The permit will be limited to these values.

Section 3 –Reserved

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (this section must be completed)

-Complete for emissions exhausting through a silo stack, chimney or vent during silo loading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.01 gr/dscf	
Stack height (feet from ground level)	221.0	
Stack inside diameter (feet)	1.1	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	58.34	
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute	3,500	
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	n/a	

-Complete for emissions exhausting through a silo stack, chimney or vent during silo unloading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.01 gr/dscf	
Stack height (feet from ground level)	221.0	
Stack inside diameter (feet)	1.1	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	58.34	
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute	3,500	
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	n/a	

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (continued)

-Complete for emissions not exhausting through a stack during silo unloading process: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify "uncontrolled" if no pollution control device is installed)	Enclosure	
Pollutant(s) Controlled	PM / PM10	
Manufacturer		
Manufacturer's Guarantee (see Note 1)		

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

O&M bin vent filter checks and daily ΔP readings.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits - Silo Loading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.30	1.31	Emissions from the fly ash silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	0.30	1.31	Emissions from the fly ash silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. §§ 7671-8671q, inclusive.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 (continued) - Requested Emission Limits - Silo Unloading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.30 (note 1)	1.31 (note 1)	Emissions from the fly ash silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	0.30 (note 1)	1.31 (note 1)	Emissions from the fly ash silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

Note 1: Toquop Energy, LLC wants the option to be able to discharge material directly from the fly ash silo into trucks for transport via bottom dump rather than through a dustless unloader. Therefore, emissions from an additional process fugitive discharge point (PF1.013) have been calculated of 0.70 lb/hr and 0.45 ton/yr. These emissions were also included in the dispersion modeling in addition to the emissions identified above.

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. 	Not Fuel Burning Equipment														
<p>SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" data-bbox="796 1094 972 1826"> <thead> <tr> <th data-bbox="796 1094 850 1826">Heat input in millions of BTU/hour</th> <th data-bbox="850 1094 972 1826">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td data-bbox="850 1094 882 1826">Up to and including 10</td> <td data-bbox="882 1094 915 1826">0.600</td> </tr> <tr> <td data-bbox="882 1094 915 1826">100</td> <td data-bbox="915 1094 948 1826">0.352</td> </tr> <tr> <td data-bbox="915 1094 948 1826">1,000</td> <td data-bbox="948 1094 980 1826">0.206</td> </tr> <tr> <td data-bbox="948 1094 980 1826">10,000</td> <td data-bbox="980 1094 1013 1826">0.091</td> </tr> <tr> <td data-bbox="1013 1094 1046 1826">100,000</td> <td data-bbox="1046 1094 1078 1826">0.025</td> </tr> </tbody> </table>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10	0.600	100	0.352	1,000	0.206	10,000	0.091	100,000	0.025	Not Fuel Burning Equipment		
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10	0.600														
100	0.352														
1,000	0.206														
10,000	0.091														
100,000	0.025														
<p>SIP 445.731(1)(b) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(1)(c) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{0.568}$</p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	Not Fuel Burning Equipment														

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>NAC 445B.22033, 445B.22027 (State Only Requirement)</u> Emissions of Particulate Matter - Sources Not Otherwise Limited <ol style="list-style-type: none"> Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 4 \cdot 10^{P_{0.67}}$ When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 55P_{0.11} - 40$ For the purposes of subsections 2 and 3: <ol style="list-style-type: none"> "E" means the maximum rate of emission in pounds per hour. "P" means the maximum allowable throughput in tons per hour. 	<p>Process Rate: $Fill = 100 \text{ tons/hr}$</p>	<p>Monitor bin vent filter pressure drop in accord with approved protocol</p>	<p>In compliance Silo loading: $E = 51.3 \text{ lb/hr}$ Proposed Limit = 0.30 lb/hr</p>
<u>SIP 445.732(2) - (Federally Enforceable SIP Requirement)</u> Particulate Matter - Industrial Sources	<p>Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.</p> <p>SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:</p> $E = 0.0193P^{0.67} (4.10P_{0.67})$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p>	<p>Process Rate: $Fill = 100 \text{ tons/hr}$</p>	<p>Monitor bin vent filter pressure drop in accord with approved protocol</p>
<u>SIP 445.732(3) - (Federally Enforceable SIP Requirement)</u> Particulate Matter - Industrial Sources	<p>When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:</p> $E = 11.78P_{0.11} - 18.14 (55P_{0.11} - 40)$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p>	<p>Not Applicable – Process Rate: $Fill = 100 \text{ tons/hr}$</p>	<p>Monitor bin vent filter pressure drop in accord with approved protocol</p>
<u>NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement)</u> Sulfur Emissions - Fuel Burning Equipment	<p>Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3.</p> <p>Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$</p> <p>Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation:</p> <p>Liquid fuel: $Y = 0.4X$ Solid Fuel: $Y = 0.6X$ Combination, $Y = (L(0.4) - S(0.6))/(L + S)$</p>	<p>Not Fuel Burning Equipment</p>	<p>For the purposes of subsections 2 and 3: <ol style="list-style-type: none"> "X" means the operating input of heat in millions of Btu's per hour. "Y" means the allowable rate of emission of sulfur in pounds per hour. </p> <p>For the purposes of subsection 3: <ol style="list-style-type: none"> "L" means the percentage of total input of heat derived from liquid fuel. "S" means the percentage of total heat derived from solid fuel. </p>

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP Article 8.1 and 8.2 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Sulfur Emissions - Fuel Burning Equipment</p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation:</p> $Y = 1.26X \quad (Y = 0.7X)$ <p>"X" = Operating heat input in millions of kg-cal (Btu's) per hour.</p> <p>"Y" = Allowable rate of sulfur emission in kg (pounds) per hour.</p> <p>SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p>	<p>Not Fuel Burning Equipment</p>	<p>Not Fuel Burning Equipment</p>	
<p>Liquid Fuel</p> $Y = 0.7X \quad (Y = 0.4X)$ <p>Solid Fuels</p> $Y = 1.1X \quad (Y = 0.6X)$ <p>Combination Fuel</p> $Y = \frac{L(0.7) + S(1.1)}{L+S}$ <p>"X" = Operating input in millions of kg-cal (Btu's) per hour.</p> <p>"Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.</p> <p>"L" = Percentage of total heat input derived from liquid fuel.</p> <p>"S" = Percentage of total heat input derived from solid fuel.</p>			
<p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p> <p>NAC 445B.2204, 445B.2204.3, 445B.2205 <i>(State Only Requirement)</i></p> <p>Other Processes Which Emit Sulfur</p> <p>1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:</p> $E = 0.292P^{0.904}$ <p>2. For the purposes of subsection 1:</p> <p>(a) "E" means the allowable sulfur emission in pounds per hour.</p> <p>(b) "P" means the total feed sulfur,</p>	<p>Not sulfur emitting process</p>	<p>Not sulfur emitting process</p>	
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ <p>When E is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p> <p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>		<p>Not sulfur emitting process</p>	

SECTION 8

EMISSION UNIT SPECIFIC

APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p>Maximum Opacity of Emissions</p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <p>(a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.</p> <p>(b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).</p> <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>	<p>Monitor bin vent filter pressure drop in accord with approved protocol</p>	<p>In Compliance</p>	
<p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p>Visible Emissions from Stationary Sources</p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>	<p>Monitor bin vent filter pressure drop in accord with approved protocol</p>	<p>In Compliance</p>	

**STORAGE SILO
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment FGD Byproduct/Gypsum Silo
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment _____ TBD
- d. Model number TBD Serial number TBD *Equip. number S2.011 / PF1.014
- e. Date equipment manufactured: TBD
- f. Please check one: Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,265 meters N: 746,941 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 48 W 48 H 60

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design storage capacity (tons) 1500 (10-day supply)
- b. Maximum loading rate (tons per hour) 15 Loading time (hours to fill) 100
- c. *Requested loading rate (tons per hour): _____
 *Hours per day _____ Days per year _____ Hours per year
- d. Maximum unloading rate (pounds per hour) 30,000
- e. Method of unloading (screw auger, etc.) rotary feeder
- f. Continuous or batch discharge continuous
- g. Requested unloading rate (tons per hour) 15
 Requested unloading rate (tons per year) 15,552
- h. Requested unloading time: Hours per day 24 Time of day _____ to _____
 Hours per day 24 Days per year 365 Hours per year 8760
- i. Material type processed (lime, cement, flyash, etc.) Gypsum

*Note: Please complete if other than the maximum loading rate (tons per hour), and/or the maximum hours of operation (24 hours per day, 8,760 hours per year), are being requested. The permit will be limited to these values.

Section 3 –Reserved

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (this section must be completed)

-Complete for emissions exhausting through a silo stack, chimney or vent during silo loading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.01 gr/dscf	
Stack height (feet from ground level)	62.0	
Stack inside diameter (feet)	1.1	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	60.0	
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute	3500	
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	n/a	

-Complete for emissions exhausting through a silo stack, chimney or vent during silo unloading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.01 gr/dscf	
Stack height (feet from ground level)	62.0	
Stack inside diameter (feet)	1.1	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	60.0	
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute	3500	
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	n/a	

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (continued)

-Complete for emissions not exhausting through a stack during silo unloading process: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify "uncontrolled" if no pollution control device is installed)	Enclosure	
Pollutant(s) Controlled	PM / PM10	
Manufacturer		
Manufacturer's Guarantee (see Note 1)		

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

O&M bin vent filter checks and daily ΔP readings.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits - Silo Loading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.30	1.31	Emissions from the gypsum silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	0.30	1.31	Emissions from the gypsum silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. §§ 7671-8671q, inclusive.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 (continued) - Requested Emission Limits - Silo Unloading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.30 (note 1)	1.31 (note 1)	Emissions from the gypsum silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	0.30 (note 1)	1.31 (note 1)	Emissions from the gypsum silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			
Note 1: Toquop Energy, LLC wants the option to be able to discharge material directly from the FGD by-product/gypsum silo into trucks for transport via bottom dump rather than through a dustless unloader. Therefore, emissions from an additional process fugitive discharge point (PF1.014) have been calculated of 0.63 lb/hr and 0.01 ton/yr. These emissions were also included in the dispersion modeling in addition to the emissions identified above.			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. 	Not Fuel Burning Equipment														
<p>SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" data-bbox="796 1094 972 1826"> <thead> <tr> <th data-bbox="796 1094 850 1826">Heat input in millions of BTU/hour</th> <th data-bbox="850 1094 972 1826">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td data-bbox="850 1094 882 1826">Up to and including 10</td> <td data-bbox="882 1094 915 1826">0.600</td> </tr> <tr> <td data-bbox="882 1094 915 1826">100</td> <td data-bbox="915 1094 948 1826">0.352</td> </tr> <tr> <td data-bbox="915 1094 948 1826">1,000</td> <td data-bbox="948 1094 980 1826">0.206</td> </tr> <tr> <td data-bbox="948 1094 980 1826">10,000</td> <td data-bbox="980 1094 1013 1826">0.091</td> </tr> <tr> <td data-bbox="1013 1094 1046 1826">100,000</td> <td data-bbox="1046 1094 1078 1826">0.025</td> </tr> </tbody> </table>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10	0.600	100	0.352	1,000	0.206	10,000	0.091	100,000	0.025	Not Fuel Burning Equipment		
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10	0.600														
100	0.352														
1,000	0.206														
10,000	0.091														
100,000	0.025														
<p>SIP 445.731(1)(b) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(1)(c) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{0.568}$</p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	Not Fuel Burning Equipment														

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B.22033, 445B.22027 (State Only Requirement) Emissions of Particulate Matter - Sources Not Otherwise Limited	Process Rate: Fill = 15 tons/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 25.16 lb/hr Proposed Limit = 0.30 lb/hr
1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM ₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. 2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 4.10P ^{0.67} 3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 55P ^{0.11} - 40 4. For the purposes of subsections 2 and 3: (a) "E" means the maximum rate of emission in pounds per hour. (b) "P" means the maximum allowable throughput in tons per hour.			
SIP 445.732(2) - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Process Rate: Fill = 15 tons/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 25.16 lb/hr Proposed Limit = 0.30 lb/hr
Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section. SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: E = 0.0193P ^{0.67} (4.10P ^{0.67}) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
SIP 445.732(3) - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Not Applicable – Process Rate: Fill = 15 tons/hr		
When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: E = 11.78P ^{0.11} -18.14 (55P ^{0.11} -40) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement) Sulfur Emissions - Fuel Burning Equipment	Not Fuel Burning Equipment		
1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: Y = 0.7X 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: Liquid fuel, Y = 0.4X Solid Fuel, Y = 0.6X Combination, Y = (L(0.4) - S(0.6))/(L + S)			
4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.			
5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.			

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Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
SIP Article 8.1 and 8.2 - (Federally Enforceable SIP Requirement) Sulfur Emissions - Fuel Burning Equipment 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$ "X" = Operating heat input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.	$Y = 1.26X \quad (Y = 0.7X)$ Not Fuel Burning Equipment	Not Fuel Burning Equipment	
 SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: <u>Liquid Fuel</u> $Y = 0.7X \quad (Y = 0.4X)$ <u>Solid Fuels</u> $Y = 1.1X \quad (Y = 0.6X)$ $\frac{\text{Combination Fuel}}{L+S} = \frac{Y}{1.1(0.7) + S(1.1)}$ "X" = Operating input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour. "L" = Percentage of total heat input derived from liquid fuel. "S" = Percentage of total heat input derived from solid fuel.	 <u>Liquid Fuel</u> $Y = 0.7X \quad (Y = 0.4X)$ <u>Solid Fuels</u> $Y = 1.1X \quad (Y = 0.6X)$ $\frac{\text{Combination Fuel}}{L+S} = \frac{Y}{1.1(0.7) + S(1.1)}$ "X" = Operating input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour. "L" = Percentage of total heat input derived from liquid fuel. "S" = Percentage of total heat input derived from solid fuel.	 <u>Liquid Fuel</u> $Y = 0.7X \quad (Y = 0.4X)$ <u>Solid Fuels</u> $Y = 1.1X \quad (Y = 0.6X)$ $\frac{\text{Combination Fuel}}{L+S} = \frac{Y}{1.1(0.7) + S(1.1)}$ "X" = Operating input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour. "L" = Percentage of total heat input derived from liquid fuel. "S" = Percentage of total heat input derived from solid fuel.	Not Fuel Burning Equipment
 8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted. <u>NAC 445B.2204, 445B.22043, 445B.2205 (State Only Requirement)</u> Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur,	 8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted. <u>NAC 445B.2204, 445B.22043, 445B.2205 (State Only Requirement)</u> Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur,	 8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted. <u>NAC 445B.2204, 445B.22043, 445B.2205 (State Only Requirement)</u> Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur,	Not sulfur emitting process
 <u>SIP 445.746 - (Federally Enforceable SIP Requirement)</u> Other Sulfur Emitting Processes SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation: $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ When E is equal to or greater than 5 kilograms (10 pounds) per hour. Where: "E" is the allowable sulfur emission in kilograms (pounds) per hour, "P" is the total feed sulfur in kilograms (pounds) per hour. SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.	 <u>SIP 445.746 - (Federally Enforceable SIP Requirement)</u> Other Sulfur Emitting Processes SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation: $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ When E is equal to or greater than 5 kilograms (10 pounds) per hour. Where: "E" is the allowable sulfur emission in kilograms (pounds) per hour, "P" is the total feed sulfur in kilograms (pounds) per hour. SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.	 <u>SIP 445.746 - (Federally Enforceable SIP Requirement)</u> Other Sulfur Emitting Processes SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation: $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ When E is equal to or greater than 5 kilograms (10 pounds) per hour. Where: "E" is the allowable sulfur emission in kilograms (pounds) per hour, "P" is the total feed sulfur in kilograms (pounds) per hour. SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.	Not sulfur emitting process

SECTION 8

EMISSION UNIT SPECIFIC

APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p>Maximum Opacity of Emissions</p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <p>(a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.</p> <p>(b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).</p> <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>		Monitor bin vent filter pressure drop in accord with approved protocol	In Compliance
<p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p>Visible Emissions from Stationary Sources</p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>		Monitor bin vent filter pressure drop in accord with approved protocol	In Compliance

**STORAGE SILO
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Quicklime Silo #1
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment _____ TBD
- d. Model number TBD Serial number TBD *Equip. number S2.012
- e. Date equipment manufactured: TBD
- f. Please check one: Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,314 meters N: 747,019 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 30 W 30 H 60

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design storage capacity (tons) 600 (4-day supply)
- b. Maximum loading rate (tons per hour) 50 Loading time (hours to fill) 12
- c. *Requested loading rate (tons per hour): _____
 *Hours per day _____ Days per year _____ Hours per year
- d. Maximum unloading rate (pounds per hour) 20,000
- e. Method of unloading (screw auger, etc.) rotary feeder
- f. Continuous or batch discharge continuous
- g. Requested unloading rate (tons per hour) 10
 Requested unloading rate (tons per year) 47,633
- h. Requested unloading time: Hours per day 24 Time of day _____ to _____
 Hours per day 24 Days per year 365 Hours per year 8760
- i. Material type processed (lime, cement, flyash, etc.) Quicklime

*Note: Please complete if other than the maximum loading rate (tons per hour), and/or the maximum hours of operation (24 hours per day, 8,760 hours per year), are being requested. The permit will be limited to these values.

Section 3 –Reserved

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (this section must be completed)

-Complete for emissions exhausting through a silo stack, chimney or vent during silo loading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.01 gr/dscf	
Stack height (feet from ground level)	62.0	
Stack inside diameter (feet)	1.1	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	66.60	
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute	4,000	
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	n/a	

-Complete for emissions exhausting through a silo stack, chimney or vent during silo unloading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Baghouse	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)		
Stack height (feet from ground level)		
Stack inside diameter (feet)		
Temperature (°F) at design capacity		
Stack exit velocity (feet per second)		
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	Quicklime from the storage silos is transferred pneumatically to the quicklime preparation building through an enclosed process. The quicklime is mixed with water and stored in slurry tanks near the wet flue gas desulfurization system prior to injection into the flue gas for SO ₂ control. This operation is not exposed to the atmosphere. The main boiler baghouse will capture residual quicklime from the FGD system.	

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (continued)

-Complete for emissions not exhausting through a stack during silo unloading process: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify "uncontrolled" if no pollution control device is installed)	N/A	
Pollutant(s) Controlled		
Manufacturer		
Manufacturer's Guarantee (see Note 1)		

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

O&M bin vent filter checks and daily ΔP readings.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits - Silo Loading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.34	1.50	Emissions from the quicklime silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	0.34	1.50	Emissions from the quicklime silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. §§ 7671-8671q, inclusive.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 (continued) - Requested Emission Limits - Silo Unloading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	N/A		Residual quicklime controlled by main boiler baghouse and included in boiler emission calculations.
Particulates as PM ₁₀	N/A		Residual quicklime controlled by main boiler baghouse and included in boiler emission calculations.
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

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EMISSION UNIT SPECIFIC
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Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status											
<p>NAC 445B.2203 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. 	<p>Not Fuel Burning Equipment</p>													
<p>SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" data-bbox="796 1100 975 1833"> <thead> <tr> <th data-bbox="796 1100 850 1833">Heat input in millions of BTU/hour</th> <th data-bbox="850 1100 975 1833">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td data-bbox="850 1100 904 1833">Up to and including 10</td> <td data-bbox="904 1100 975 1833">0.600</td> </tr> <tr> <td data-bbox="904 1100 957 1833">100</td> <td data-bbox="957 1100 975 1833">0.352</td> </tr> <tr> <td data-bbox="957 1100 1011 1833">1,000</td> <td data-bbox="1011 1100 1029 1833">0.206</td> </tr> <tr> <td data-bbox="1029 1100 1083 1833">10,000</td> <td data-bbox="1083 1100 1101 1833">0.091</td> </tr> <tr> <td data-bbox="1101 1100 1155 1833">100,000</td> <td data-bbox="1155 1100 1173 1833">0.025</td> </tr> </tbody> </table>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10	0.600	100	0.352	1,000	0.206	10,000	0.091	100,000	0.025	<p>Not Fuel Burning Equipment</p>	
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million													
Up to and including 10	0.600													
100	0.352													
1,000	0.206													
10,000	0.091													
100,000	0.025													
<p>SIP 445.731(1)(b) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p>	<p>Not Fuel Burning Equipment</p>													
<p>SIP 445.731(1)(c) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{0.568}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p>	<p>Not Fuel Burning Equipment</p>													
<p>SIP 445.731(3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	<p>Not Fuel Burning Equipment</p>													

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B.22033, 445B.22027 (State Only Requirement) Emissions of Particulate Matter - Sources Not Otherwise Limited	Process Rate: Fill = 50 ton/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 44.6 lb/hr Proposed Limit = 0.34 lb/hr
1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM ₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. 2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 4.10P ^{0.67} 3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 55P ^{0.11} - 40 4. For the purposes of subsections 2 and 3: (a) "E" means the maximum rate of emission in pounds per hour. (b) "P" means the maximum allowable throughput in tons per hour.			
SIP 445.732 - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Process Rate: Fill = 50 ton/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 44.6 lb/hr Proposed Limit = 0.34 lb/hr
Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.			
SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: E = 0.0193P ^{0.67} (4.10P ^{0.67}) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
SIP 445.732 (3) - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Process Rate: Fill = 50 ton/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 44.6 lb/hr Proposed Limit = 0.34 lb/hr
When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: E = 11.78P ^{0.11} -18.14 (55P ^{0.11} - 40) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement) Sulfur Emissions - Fuel Burning Equipment	Not Fuel Burning Equipment		
1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: Y = 0.7X 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: Liquid fuel, Y = 0.4X Solid Fuel, Y = 0.6X Combination, Y = (L(0.4) - S(0.6))/(L + S)			
4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.			
5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.			

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP Article 8.1 and 8.2 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Sulfur Emissions - Fuel Burning Equipment</p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation:</p> $Y = 1.26X \quad (Y = 0.7X)$ <p>"X" = Operating heat input in millions of kg-cal (Btu's) per hour.</p> <p>"Y" = Allowable rate of sulfur emission in kg (pounds) per hour.</p>		Not Fuel Burning Equipment	
<p>SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p>	<p>Liquid Fuel</p> $Y = 0.7X \quad (Y = 0.4X)$ <p>Solid Fuels</p> $Y = 1.1X \quad (Y = 0.6X)$ <p>Combination Fuel</p> $Y = \frac{L(0.7) + S(1.1)}{L+S}$ <p>"X" = Operating input in millions of kg-cal (Btu's) per hour.</p> <p>"Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.</p> <p>"L" = Percentage of total heat input derived from liquid fuel.</p> <p>"S" = Percentage of total heat input derived from solid fuel.</p>		Not Fuel Burning Equipment
<p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p> <p>NAC 445B.2204, 445B.2204.3, 445B.2205 <i>(State Only Requirement)</i></p> <p>Other Processes Which Emit Sulfur</p> <p>1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:</p> $E = 0.292P^{0.904}$ <p>2. For the purposes of subsection 1:</p> <ul style="list-style-type: none"> (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, 	<p>1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ <p>When E is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p>	<p>Not sulfur emitting process</p>	
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>		<p>Not sulfur emitting process</p>	

SECTION 8

EMISSION UNIT SPECIFIC

APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p>Maximum Opacity of Emissions</p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <p>(a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.</p> <p>(b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).</p> <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>		Monitor bin vent filter pressure drop in accord with approved protocol	In Compliance
<p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p>Visible Emissions from Stationary Sources</p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>		Monitor bin vent filter pressure drop in accord with approved protocol	In Compliance

**STORAGE SILO
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Quicklime Silo #2
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment _____ TBD
- d. Model number TBD Serial number TBD *Equip. number S2.013
- e. Date equipment manufactured: TBD
- f. Please check one: Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,228 meters N: 746,766 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 30 W 30 H 60

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design storage capacity (tons) 600 (4-day supply)
- b. Maximum loading rate (tons per hour) 50 Loading time (hours to fill) 12
- c. *Requested loading rate (tons per hour): _____
 *Hours per day _____ Days per year _____ Hours per year
- d. Maximum unloading rate (pounds per hour) 20,000
- e. Method of unloading (screw auger, etc.) rotary feeder
- f. Continuous or batch discharge continuous
- g. Requested unloading rate (tons per hour) 10
 Requested unloading rate (tons per year) 47,633
- h. Requested unloading time: Hours per day 24 Time of day _____ to _____
 Hours per day 24 Days per year 365 Hours per year 8760
- i. Material type processed (lime, cement, flyash, etc.) Quicklime

*Note: Please complete if other than the maximum loading rate (tons per hour), and/or the maximum hours of operation (24 hours per day, 8,760 hours per year), are being requested. The permit will be limited to these values.

Section 3 –Reserved

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (this section must be completed)

-Complete for emissions exhausting through a silo stack, chimney or vent during silo loading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.01 gr/dscf	
Stack height (feet from ground level)	62.0	
Stack inside diameter (feet)	1.1	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	66.60	
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute	4,000	
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	n/a	

-Complete for emissions exhausting through a silo stack, chimney or vent during silo unloading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)		
Stack height (feet from ground level)		
Stack inside diameter (feet)		
Temperature (°F) at design capacity		
Stack exit velocity (feet per second)		
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	Quicklime from the storage silos is transferred pneumatically to the quicklime preparation building through an enclosed process. The quicklime is mixed with water and stored in slurry tanks near the wet flue gas desulfurization system prior to injection into the flue gas for SO ₂ control. This operation is not exposed to the atmosphere. The main boiler baghouse will capture residual quicklime from the FGD system.	

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (continued)

-Complete for emissions not exhausting through a stack during silo unloading process: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify "uncontrolled" if no pollution control device is installed)	N/A	
Pollutant(s) Controlled		
Manufacturer		
Manufacturer's Guarantee (see Note 1)		

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

O&M bin vent filter checks and daily ΔP readings.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits - Silo Loading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.34	1.50	Emissions from the quicklime silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	0.34	1.50	Emissions from the quicklime silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. §§ 7671-8671q, inclusive.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 (continued) - Requested Emission Limits - Silo Unloading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	N/A		Emissions from the quicklime silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	N/A		Emissions from the quicklime silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. 	Not Fuel Burning Equipment														
<p>SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" data-bbox="796 1094 972 1826"> <thead> <tr> <th data-bbox="796 1094 850 1826">Heat input in millions of BTU/hour</th> <th data-bbox="850 1094 972 1826">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td data-bbox="850 1094 882 1826">Up to and including 10</td> <td data-bbox="882 1094 915 1826">0.600</td> </tr> <tr> <td data-bbox="882 1094 915 1826">100</td> <td data-bbox="915 1094 948 1826">0.352</td> </tr> <tr> <td data-bbox="915 1094 948 1826">1,000</td> <td data-bbox="948 1094 980 1826">0.206</td> </tr> <tr> <td data-bbox="948 1094 980 1826">10,000</td> <td data-bbox="980 1094 1013 1826">0.091</td> </tr> <tr> <td data-bbox="1013 1094 1046 1826">100,000</td> <td data-bbox="1046 1094 1078 1826">0.025</td> </tr> </tbody> </table>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10	0.600	100	0.352	1,000	0.206	10,000	0.091	100,000	0.025	Not Fuel Burning Equipment		
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10	0.600														
100	0.352														
1,000	0.206														
10,000	0.091														
100,000	0.025														
<p>SIP 445.731(1)(b) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(1)(c) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{0.568}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p>	Not Fuel Burning Equipment														
	Not Fuel Burning Equipment														

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B.22033, 445B.22027 (State Only Requirement) Emissions of Particulate Matter - Sources Not Otherwise Limited	Process Rate: Fill = 50 ton/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 44.6 lb/hr Proposed Limit = 0.34 lb/hr
1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM ₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. 2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 4.10P ^{0.67} 3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 55P ^{0.11} - 40 4. For the purposes of subsections 2 and 3: (a) "E" means the maximum rate of emission in pounds per hour. (b) "P" means the maximum allowable throughput in tons per hour.			
SIP 445.732(2) - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Process Rate: Fill = 50 ton/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 44.6 lb/hr Proposed Limit = 0.34 lb/hr
Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section. SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: E = 0.0193P ^{0.67} (4.10P ^{0.67}) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
SIP 445.732(3) - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Process Rate: Fill = 50 ton/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 44.6 lb/hr Proposed Limit = 0.34 lb/hr
When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: E = 11.78P ^{0.11} -18.14 (55P ^{0.11} - 40) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement) Sulfur Emissions - Fuel Burning Equipment	Not Fuel Burning Equipment		
1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: Y = 0.7X 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: Liquid fuel, Y = 0.4X Solid Fuel, Y = 0.6X Combustion, Y = (L(0.4) - S(0.6))/(L + S)			
4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.			
5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.			

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP Article 8.1 and 8.2 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Sulfur Emissions - Fuel Burning Equipment</p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation:</p> $Y = 1.26X \quad (Y = 0.7X)$ <p>"X" = Operating heat input in millions of kg-cal (Btu's) per hour.</p> <p>"Y" = Allowable rate of sulfur emission in kg (pounds) per hour.</p>		Not Fuel Burning Equipment	
<p>SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p> $\begin{aligned} \text{Liquid Fuel} \\ Y &= 0.7X \quad (Y = 0.4X) \\ \text{Solid Fuels} \\ Y &= 1.1X \quad (Y = 0.6X) \\ \text{Combination Fuel} \\ Y &= \frac{L(0.7) + S(1.1)}{L+S} \end{aligned}$ <p>"X" = Operating input in millions of kg-cal (Btu's) per hour.</p> <p>"Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.</p> <p>"L" = Percentage of total heat input derived from liquid fuel.</p> <p>"S" = Percentage of total heat input derived from solid fuel.</p>		Not Fuel Burning Equipment	
<p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p> <p>NAC 445B.2204, 445B.2204.3, 445B.2205 <i>(State Only Requirement)</i></p> <p>Other Processes Which Emit Sulfur</p> <p>1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:</p> $E = 0.292P^{0.904}$ <p>2. For the purposes of subsection 1:</p> <ul style="list-style-type: none"> (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, 	<p>1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ <p>When E is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p>	<p>Not sulfur emitting process</p>	
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>		Not sulfur emitting process	

SECTION 8

EMISSION UNIT SPECIFIC

APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p>Maximum Opacity of Emissions</p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <p>(a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.</p> <p>(b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).</p> <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>		Monitor bin vent filter pressure drop in accord with approved protocol	In Compliance
<p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p>Visible Emissions from Stationary Sources</p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>		Monitor bin vent filter pressure drop in accord with approved protocol	In Compliance

**STORAGE SILO
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Activated Carbon Silo
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment _____ TBD
- d. Model number TBD Serial number TBD *Equip. number S2.014
- e. Date equipment manufactured: TBD
- f. Please check one: Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,227 meters N: 746,751 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 20 W 20 H 33

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design storage capacity (tons) 40 (14-day supply)
- b. Maximum loading rate (tons per hour) 30 Loading time (hours to fill) 1.3
- c. *Requested loading rate (tons per hour): 30

*Hours per day _____ Days per year _____ Hours per year
- d. Maximum unloading rate (pounds per hour) 300
- e. Method of unloading (screw auger, etc.) rotary feeder
- f. Continuous or batch discharge continuous
- g. Requested unloading rate (tons per hour) 0.15

Requested unloading rate (tons per year) 1183
- h. Requested unloading time: Hours per day _____ Time of day _____ to _____

Hours per day _____ Days per year _____ Hours per year _____
- i. Material type processed (lime, cement, flyash, etc.) Activated Carbon

*Note: Please complete if other than the maximum loading rate (tons per hour), and/or the maximum hours of operation (24 hours per day, 8,760 hours per year), are being requested. The permit will be limited to these values.

Section 3 –Reserved

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (this section must be completed)

-Complete for emissions exhausting through a silo stack, chimney or vent during silo loading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.01 gr/dscf	
Stack height (feet from ground level)	62.0	
Stack inside diameter (feet)	1.1	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	66.60	
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute	4,000	
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	n/a	

-Complete for emissions exhausting through a silo stack, chimney or vent during silo unloading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Baghouse	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)		
Stack height (feet from ground level)		
Stack inside diameter (feet)		
Temperature (°F) at design capacity		
Stack exit velocity (feet per second)		
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	Discharge from the activated carbon silo is an enclosed process. The activated carbon is piped to the main boiler baghouse, which will capture residual activated carbon	

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (continued)

-Complete for emissions not exhausting through a stack during silo unloading process: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify "uncontrolled" if no pollution control device is installed)	N/A	
Pollutant(s) Controlled		
Manufacturer		
Manufacturer's Guarantee (see Note 1)		

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

O&M bin vent filter checks and daily ΔP readings.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits - Silo Loading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.34	1.50	Emissions from the carbon silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	0.34	1.50	Emissions from the carbon silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. §§ 7671-8671q, inclusive.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 (continued) - Requested Emission Limits - Silo Unloading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	NA		Controlled by main boiler baghouse and included in boiler emissions calculations.
Particulates as PM ₁₀	NA		Controlled by main boiler baghouse and included in boiler emissions calculations.
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. 	Not Fuel Burning Equipment														
<p>SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" data-bbox="796 1094 972 1826"> <thead> <tr> <th data-bbox="796 1094 850 1826">Heat input in millions of BTU/hour</th> <th data-bbox="850 1094 972 1826">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td data-bbox="850 1094 882 1826">Up to and including 10</td> <td data-bbox="882 1094 915 1826">0.600</td> </tr> <tr> <td data-bbox="882 1094 915 1826">100</td> <td data-bbox="915 1094 948 1826">0.352</td> </tr> <tr> <td data-bbox="915 1094 948 1826">1,000</td> <td data-bbox="948 1094 980 1826">0.206</td> </tr> <tr> <td data-bbox="948 1094 980 1826">10,000</td> <td data-bbox="980 1094 1013 1826">0.091</td> </tr> <tr> <td data-bbox="1013 1094 1046 1826">100,000</td> <td data-bbox="1046 1094 1078 1826">0.025</td> </tr> </tbody> </table>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10	0.600	100	0.352	1,000	0.206	10,000	0.091	100,000	0.025	Not Fuel Burning Equipment		
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10	0.600														
100	0.352														
1,000	0.206														
10,000	0.091														
100,000	0.025														
<p>SIP 445.731(1)(b) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(1)(c) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{0.568}$</p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour. "Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	Not Fuel Burning Equipment														

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B.22033, 445B.22027 (State Only Requirement) Emissions of Particulate Matter - Sources Not Otherwise Limited	Process Rate: Fill = 300 ton/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 63.0 lb/hr Proposed Limit = 0.34 lb/hr
1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM ₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. 2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 4.10P ^{0.67} 3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 55P ^{0.11} - 40 4. For the purposes of subsections 2 and 3: (a) "E" means the maximum rate of emission in pounds per hour. (b) "P" means the maximum allowable throughput in tons per hour.			
SIP 445.732 - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Process Rate greater than 60,000 pounds/hour: Fill = 300 ton/hr		
Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.			
SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: $E = 0.0193P^{0.67} (4.10P^{0.67})$ "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
SIP 445.732 (3) - (Federally Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Process Rate: Fill = 300 ton/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 63.0 lb/hr Proposed Limit = 0.34 lb/hr
When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: $E = 11.78P^{0.11} - 18.14 (55P^{0.11} - 40)$ "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.			
NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement) Sulfur Emissions - Fuel Burning Equipment	Not Fuel Burning Equipment		
1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: Y = 0.7X 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: Liquid fuel, Y = 0.4X Solid Fuel, Y = 0.6X Combustion, Y = (L(0.4) - S(0.6))/(L + S)			
4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.			
5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.			

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
SIP Article 8.1 and 8.2 - (Federally Enforceable SIP Requirement) Sulfur Emissions - Fuel Burning Equipment 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$ "X" = Operating heat input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.	Not Fuel Burning Equipment		
SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:	$\begin{aligned} \text{Liquid Fuel} \\ Y = 0.7X \quad (Y = 0.4X) \end{aligned}$ $\begin{aligned} \text{Solid Fuels} \\ Y = 1.1X \quad (Y = 0.6X) \end{aligned}$ $\begin{aligned} \text{Combination Fuel} \\ Y = \frac{L(0.7) + S(1.1)}{L+S} \end{aligned}$ "X" = Operating input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour. "L" = Percentage of total heat input derived from liquid fuel. "S" = Percentage of total heat input derived from solid fuel.	Not Fuel Burning Equipment	
8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted. NAC 445B.2204, 445B.2204.3, 445B.2205 (State Only Requirement) Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur,	Not sulfur emitting process		
SIP 445.746 - (Federally Enforceable SIP Requirement) Other Sulfur Emitting Processes SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation: $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ When E is equal to or greater than 5 kilograms (10 pounds) per hour. Where: "E" is the allowable sulfur emission in kilograms (pounds) per hour, "P" is the total feed sulfur in kilograms (pounds) per hour. SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.	Not sulfur emitting process		
SIP 445.746 - (Federally Enforceable SIP Requirement) Other Sulfur Emitting Processes SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.		Not sulfur emitting process	

SECTION 8

EMISSION UNIT SPECIFIC

APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p>Maximum Opacity of Emissions</p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <p>(a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.</p> <p>(b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).</p> <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>		Monitor bin vent filter pressure drop in accord with approved protocol	In Compliance
<p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p>Visible Emissions from Stationary Sources</p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>		Monitor bin vent filter pressure drop in accord with approved protocol	In Compliance

**STORAGE SILO
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Byproduct/Waste Silo and Silo Discharge to Trucks
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment _____ TBD
- d. Model number TBD Serial number TBD *Equip. number S2.015 / PF1.011
- e. Date equipment manufactured: TBD
- f. Please check one: Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- h. UTM Coordinates 4,091,308 meters N: 746,940 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- i. Basic equipment dimensions (feet): L 48 W 48 H 60

* The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design storage capacity (tons) 1500 (10-day supply)
- b. Maximum loading rate (tons per hour) 15 Loading time (hours to fill) 100
- c. *Requested loading rate (tons per hour): _____
 *Hours per day _____ Days per year _____ Hours per year
- d. Maximum unloading rate (pounds per hour) 30,000
- e. Method of unloading (screw auger, etc.) rotary feeder
- f. Continuous or batch discharge continuous
- g. Requested unloading rate (tons per hour) 15
 Requested unloading rate (tons per year) 15,552
- h. Requested unloading time: Hours per day 24 Time of day _____ to _____
 Hours per day 24 Days per year 365 Hours per year 8760
- i. Material type processed (lime, cement, flyash, etc.) Off-spec FGD byproduct

*Note: Please complete if other than the maximum loading rate (tons per hour), and/or the maximum hours of operation (24 hours per day, 8,760 hours per year), are being requested. The permit will be limited to these values.

Section 3 –Reserved

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (this section must be completed)

-Complete for emissions exhausting through a silo stack, chimney or vent during silo loading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	Bin Vent Filter	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 2)	0.01 gr/dscf	
Stack height (feet from ground level)	62.0	
Stack inside diameter (feet)	1.2	
Temperature (°F) at design capacity	Ambient	
Stack exit velocity (feet per second)	60.0	
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute	4000	
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)	n/a	

-Complete for emissions exhausting through a silo stack, chimney or vent during silo unloading process: (baghouse, wet scrubber, cyclone, no control, etc.)

	Control #1	Control #2
Type of Control: (See Note 1)	N/A	
Pollutant(s) Controlled		
Manufacturer		
Manufacturer's Guarantee (see Note 2)		
Stack height (feet from ground level)		
Stack inside diameter (feet)		
Temperature (°F) at design capacity		
Stack exit velocity (feet per second)		
Gas volume flow rate: actual cubic feet per minute		
Gas volume flow rate: dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g., raincap, horizontal discharge)		

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment (continued)

-Complete for emissions not exhausting through a stack during silo unloading process: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify "uncontrolled" if no pollution control device is installed)	Water sprays (if necessary); assumed wet material	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer		
Manufacturer's Guarantee (see Note 1)		

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

O&M bin vent filter checks and daily ΔP readings.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits - Silo Loading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.34	1.50	Emissions from the byproduct/waste silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Particulates as PM ₁₀	0.34	1.50	Emissions from the byproduct/waste silo are controlled by the silo bin vent filter. See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. §§ 7671-8671q, inclusive.

**STORAGE SILO
APPLICATION FORM
CONTINUED**

Section 7 (continued) - Requested Emission Limits - Silo Unloading

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.09	0.09	See emission calculations in Appendix 5
Particulates as PM ₁₀	0.09	0.09	See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B.2203 (State Only Requirement) Emissions of Particulate Matter - Fuel Burning Equipment 1. Source may not cause or permit the emission of PM ₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas: <ol style="list-style-type: none"> For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{0.568}$ 2. For the purposes of paragraphs b and c of subsection 1: <ol style="list-style-type: none"> "X" means the operating rate in million Btu's per hour. "Y" means the allowable rate of emission in pounds per million Btu's. 	Not Fuel Burning Equipment		
SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:	Not Fuel Burning Equipment		
SIP 445.731(1)(b) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{0.231}$ Where "X" = maximum equipment capacity rate in million Btu's per hour. $"Y" = allowable rate of emission in pounds per million Btu's.$	Not Fuel Burning Equipment		
SIP 445.731(1)(c) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{0.568}$ where "X" = maximum equipment capacity rate in million Btu's per hour. $"Y" = allowable rate of emission in pounds per million Btu's.$	Not Fuel Burning Equipment		
SIP 445.731(3) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.	Not Fuel Burning Equipment		

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B.22033, 445B.22027 (State Only Requirement) Emissions of Particulate Matter - Sources Not Otherwise Limited	Process Rate: Fill = 15 tons/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 25.16 lb/hr Proposed Limit = 0.34 lb/hr
1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM ₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. 2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 4.10P ^{0.67} 3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 55P ^{0.11} - 40 4. For the purposes of subsections 2 and 3: (a) "E" means the maximum rate of emission in pounds per hour. (b) "P" means the maximum allowable throughput in tons per hour.	Process Rate: Fill = 15 tons/hr	Monitor bin vent filter pressure drop in accord with approved protocol	
SIP 445.732 - (Federal Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Process Rate: Fill = 15 tons/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 25.16 lb/hr Proposed Limit = 0.34 lb/hr
Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section. SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: E = 0.0193P ^{0.67} (4.10P ^{0.67}) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.	Process Rate: Fill = 15 tons/hr	Monitor bin vent filter pressure drop in accord with approved protocol	In compliance Silo loading: E= 25.16 lb/hr Proposed Limit = 0.34 lb/hr
SIP 445.732 (3) - (Federal Enforceable SIP Requirement) Particulate Matter - Industrial Sources	Not Applicable – Process Rate: Fill = 15 tons/hr	Not Fuel Burning Equipment	
When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: E = 11.78P ^{0.11} -18.14 (55P ^{0.11} -40) "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.	Not Applicable – Process Rate: Fill = 15 tons/hr	Not Fuel Burning Equipment	
NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement) Sulfur Emissions - Fuel Burning Equipment	1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: Y = 0.7X 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: Liquid fuel, Y = 0.4X Solid Fuel, Y = 0.6X Combination, Y = (L(0.4) - S(0.6))/(L + S)	Not Fuel Burning Equipment	
4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.			
5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.			

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP Article 8.1 and 8.2 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Sulfur Emissions - Fuel Burning Equipment</p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation:</p> $Y = 1.26X \quad (Y = 0.7X)$ <p>"X" = Operating heat input in millions of kg-cal (Btu's) per hour.</p> <p>"Y" = Allowable rate of sulfur emission in kg (pounds) per hour.</p>		Not Fuel Burning Equipment	
<p>SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p>	<p>Liquid Fuel</p> $Y = 0.7X \quad (Y = 0.4X)$ <p>Solid Fuels</p> $Y = 1.1X \quad (Y = 0.6X)$ <p>Combination Fuel</p> $Y = \frac{L(0.7) + S(1.1)}{L+S}$ <p>"X" = Operating input in millions of kg-cal (Btu's) per hour.</p> <p>"Y" = Allowable rate of sulfur emissions in kg (pounds) per hour.</p> <p>"L" = Percentage of total heat input derived from liquid fuel.</p> <p>"S" = Percentage of total heat input derived from solid fuel.</p>		Not Fuel Burning Equipment
<p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p> <p>NAC 445B.2204, 445B.2204.3, 445B.2205 <i>(State Only Requirement)</i></p> <p>Other Processes Which Emit Sulfur</p> <p>1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:</p> $E = 0.292P^{0.904}$ <p>2. For the purposes of subsection 1:</p> <ul style="list-style-type: none"> (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, 	<p>1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ <p>When E is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p>	<p>Not sulfur emitting process</p>	
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p>		<p>Not sulfur emitting process</p>	

SECTION 8

EMISSION UNIT SPECIFIC

APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p>Maximum Opacity of Emissions</p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <p>(a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60.</p> <p>(b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h).</p> <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p>		Monitor bin vent filter pressure drop in accord with approved protocol	In Compliance
<p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p>Visible Emissions from Stationary Sources</p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p>		Monitor bin vent filter pressure drop in accord with approved protocol	In Compliance

**INDUSTRIAL PROCESS
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Coal Unloading/Continuous Bottom Dump Unloader [See Attached Equipment List]
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number PF1.001
- e. Date equipment manufactured: TBD
- f. Please check one:
 Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. For crushers: size output setting, check one:
 Primary ($\geq 4"$)
 Secondary ($< 4" \text{ but } \geq 1"$)
 Tertiary ($< 1"$)
- h. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- i. UTM Coordinates 4,091,454 meters N; 746,920 meters E; Zone 11
(Please specify NAD 27 or NAD 83)
- j. Basic equipment dimensions (feet): L [See Attached] W [See Attached] H [See Attached]

*The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design capacity (tons per hour) 5,000 tons/hour
- b. Requested operating rate (tons per hour) 5,000 tons/hour
- c. Requested operating time: (time of day)* _____ to
Hours per day 24 hours/day Hours per year 8760 hours/year
- d. Batch load or charge weight (tons) (if applicable) N/A
- e. Total hours required to process batch or charge (if applicable) N/A
- f. Maximum operating rate (tons per year) 2,944,000 tons/year
- g. Requested operating rate (tons per year)* 2,944,000 tons/year
- f. Type of material processed coal
- g. Minimum moisture content 19.42%

*Note: Please complete if other than the maximum design capacity (tons per hour and tons per year) and/or the maximum hours of operation (24 hours per day, 8760 hours per year) are being requested. The permit will be limited to these values.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 3 - Fuel Usage

(This section only applies to fuel consumed/combusted within the process unit. Fuels consumed/combusted in combustion units are to be listed on the Combustion Equipment Application Form.)

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	gallons				
	Gallons				
Gasoline	Gallons				
Propane	cubic feet				
Natural Gas	cubic feet				Not Applicable
*Waste Oil	Gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s) Not Applicable								

If more than one type of fuel is combusted, under this operating scenario please specify primary fuel and percentage on a maximum hourly and annual basis (if fuel blending is the primary fuel, identify percentages of each fuel blended). Attach additional information to this form if necessary.

*Firing of waste oil will require multi metals test to insure fuel is non-hazardous.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment/Exhaust Stack Parameters (this section must be completed)

-Complete for emissions **exhausting through a stack, chimney or vent**: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	N/A	
Pollutant(s) Controlled		
Manufacturer		
Manufacturer's Guarantee (see Note 2)		
Stack height (feet from ground level)		
Stack inside diameter (feet)		
Temperature (°F) at design capacity		
Stack exit velocity (feet per second)		
Gas volume flow rate: Actual cubic feet per minute		
Gas volume flow rate: Dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g. raincap, horizontal discharge)		

-Complete for emissions **not** exhausting through a stack, chimney or vent: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	Wet Suppression/Fogging Sprays	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	N/A	
Manufacturer's Guarantee (see Note 1)	N/A	

Note: Indicate the specific point(s) of emission control application for this emission unit. This must be provided as part of the process flow diagram as required in section 7 of the General Information section of the application form.

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

Ensure baghouse is operating during coal unloading activities. Monitor baghouse ΔP readings during unloading activities. Per NSPS Subpart Y, conduct an initial performance test consisting of a Method 9 opacity reading following procedures in §60.11.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.11	0.03	See emission calculations in Appendix 5
Particulates as PM ₁₀	0.11	0.03	See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

**Toquop Energy, LLC
Toquop Energy Project**

Coal Unloading / Bottom Dump Unloader

Client Equip #	Description	TPH (stph)	Belt Width (in)	Horizontal	LIFT (ft)	Dust Control Mechanism
				LGTH (ft)	NA	NA
Thawing Shed	Rail Car Thawing Shed	NA	NA	NA	NA	N/A
Dumper Building	Rail Car Bottom Dump Building	NA	NA	NA	NA	N/A
Loadout Hoppers	Rail Car Loadout Hoppers and Structure	5000	0	0	0	Wet Suppression
Belt Feeder 1A	Train Unload Feeder No 1A	2500	66	94	90	Wet Suppression
Belt Feeder 1B	Train Unload Feeder No 1B	2500	66	94	90	Wet Suppression
Unloading Conveyor (ID-1C2)	Coal Unloading Conveyor No.1A	2500	66	720	10	Enclosed w/ wilk wys
Unloading Conveyor (ID-1C2)	Coal Unloading Conveyor No.1B	2500	66	720	10	Enclosed w/ wilk wys

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
NAC 445B.2203 (State Only Requirement) Emissions of Particulate Matter - Fuel Burning Equipment 1. Source may not cause or permit the emission of PM ₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas: a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{0.568}$ 2. For the purposes of paragraphs b and c of subsection 1: a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's.	Not Fuel burning Equipment														
SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table: <table border="1" data-bbox="816 1087 971 1848"> <thead> <tr> <th data-bbox="816 1087 971 1151">Heat input in millions of BTU/hour</th> <th data-bbox="816 1151 971 1214">Maximum allowable emission of particulate matter in pounds per hour per million BTU/hour</th> </tr> </thead> <tbody> <tr> <td data-bbox="816 1214 971 1256">Up to and including 10</td> <td data-bbox="816 1256 971 1277">0.600</td> </tr> <tr> <td data-bbox="816 1277 971 1320">100.....</td> <td data-bbox="816 1320 971 1341">0.352</td> </tr> <tr> <td data-bbox="816 1341 971 1383">1,000.....</td> <td data-bbox="816 1383 971 1404">0.206</td> </tr> <tr> <td data-bbox="816 1404 971 1446">10,000.....</td> <td data-bbox="816 1446 971 1467">0.091</td> </tr> <tr> <td data-bbox="816 1467 971 1510">100,000.....</td> <td data-bbox="816 1510 971 1531">0.025</td> </tr> </tbody> </table>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million BTU/hour	Up to and including 10	0.600	100.....	0.352	1,000.....	0.206	10,000.....	0.091	100,000.....	0.025	Not Fuel Burning Equipment		
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million BTU/hour														
Up to and including 10	0.600														
100.....	0.352														
1,000.....	0.206														
10,000.....	0.091														
100,000.....	0.025														
SIP 445.731(1)(b) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{0.231}$ Where "X" = maximum equipment capacity rate in million Btu's per hour. $Y = \text{allowable rate of emission in pounds per million Btu's.}$	Not Fuel Burning Equipment														
SIP 445.731(1)(c) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{0.568}$ where "X" = maximum equipment capacity rate in million Btu's per hour. $Y = \text{allowable rate of emission in pounds per million Btu's.}$	Not Fuel Burning Equipment														
SIP 445.731(3) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.	Not Fuel Burning Equipment														

SECTION 8

EMISSION UNIT SPECIFIC

APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22033, 445B.22027 [State Only Requirement]</p> <p>Emissions of Particulate Matter - Sources Not Otherwise Limited</p> <p>1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.</p> <p>2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 4.10P^{0.67}</p> <p>3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: E = 55P^{0.11} - 40</p> <p>4. For the purposes of subsections 2 and 3:</p> <p>(a) "E" means the maximum rate of emission in pounds per hour.</p> <p>(b) "P" means the maximum allowable throughput in tons per hour.</p>		Monitor in accord with approved protocol	In compliance E < 100.36 lbs/hr Proposed Limit = 0.11 lbs/hr
<p>SIP 445.732 - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.</p> <p>SIP 445.732(2). - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: $E = 0.0193P^{0.67} / (4.10P^{0.67})$ </p> <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p>	<p>Process Rate is greater than 60,000 pound per hour $P = 5,000 \text{ tons/hour}$</p>		
<p>SIP 445.732(3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: $E = 11.78P^{0.11} - 13.14 / (55P^{0.11} - 40)$ </p> <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p>		Monitor in accord with approved protocol	In Compliance E < 100.36 lbs/hr Proposed Limit = 0.11 lbs/hr
<p>NAC 445B.2204, 445B.22043, 445B.22047 [State Only Requirement]</p> <p>Sulfur Emissions - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3: $\text{Combination, } Y = (L(0.4) - S(0.6)) / (L + S)$ </p> <p>(a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour.</p> <p>2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: Y = 0.7X</p> <p>3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: Liquid fuel, Y = 0.4X Solid Fuel, Y = 0.6X</p> <p>4. For the purposes of subsections 2 and 3:</p> <p>(a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.</p>	<p>Not Fuel Burning Equipment</p>		

SECTION 8 EMISSION UNIT SPECIFIC APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
SIP Article 8.1 and 8.2 - <i>(Federally Enforceable SIP Requirement)</i> Sulfur Emissions - Fuel Burning Equipment 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.25X (Y = 0.7X)$ "X" = Operating heat input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emission in kg (pounds) per hour.	Not Fuel Burning Equipment		
SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: $\text{Liquid Fuel} \quad Y = 0.7X (Y = 0.4X)$ $\text{Solid Fuels} \quad Y = 1.1X (Y = 0.6X)$ $\text{Combination Fuel} \quad Y = \frac{L(0.7) + S(1.1)}{L + S}$ "X" = Operating input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour. "L" = Percentage of total heat input derived from liquid fuel. "S" = Percentage of total heat input derived from solid fuel.	Not Fuel Burning Equipment		
8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted. NAC 445B.2204, 445B.22043, 445B.2205 <i>(State Only Requirement)</i> Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.	Not sulfur emitting equipment		
SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i> Other Sulfur Emitting Processes SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation: $E = 0.271P^{0.904} (0.292P^{0.904})$ When $\bullet E \bullet$ is equal to or greater than 5 kilograms (10 pounds) per hour. Where: "E" is the allowable sulfur emission in kilograms (pounds) per hour. "P" is the total feed sulfur in kilograms (pounds) per hour. SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.	Not sulfur emitting equipment		
SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i> Other Sulfur Emitting Processes SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.	Not sulfur emitting equipment		

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>NAC 445B.22017 (State Only Requirement)</u> <u>Maximum Opacity of Emissions</u> 1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods: (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). 2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.	Observation of visible emissions in accord with approved protocol	In Compliance	
<u>SIP 445.721 (Federally Enforceable SIP Requirement)</u> <u>Visible Emissions from Stationary Sources</u> These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.	Observation of visible emissions in accord with approved protocol	In Compliance	
40 CFR 60.250 – NSPS Subpart Y <u>Standards of Performance for Coal Preparation Plants.</u> The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems. Any facility that commences construction or modification after October 24, 1974, is subject to the requirements of this subpart. §60.252(c) – On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.	Performance testing will be conducted in accord with §60.8, and Method 9 and the procedures in §60.11 will be used to determine opacity.	In Compliance	

**INDUSTRIAL PROCESS
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Coal Yard Conveying [See Attached Equipment List]
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number PF1.002
- e. Date equipment manufactured: TBD
- f. Please check one:
 Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. For crushers: size output setting, check one:
 Primary ($\geq 4"$)
 Secondary ($< 4" \text{ but } \geq 1"$)
 Tertiary ($< 1"$)
- h. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- i. UTM Coordinates 4,091,452 meters N; 746,860 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- j. Basic equipment dimensions (feet): L [See Attached] W [See Attached] H [See Attached]

*The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design capacity (tons per hour) 5,000 tons/hour
- b. Requested operating rate (tons per hour) 5,000 tons/hour
- c. Requested operating time: (time of day)* _____ to
Hours per day _____ Hours per year _____
- d. Batch load or charge weight (tons) (if applicable) N/A
- e. Total hours required to process batch or charge (if applicable) N/A
- f. Maximum operating rate (tons per year) 2,944,000 tons/year
- g. Requested operating rate (tons per year)* 2,944,000 tons/year
- f. Type of material processed coal
- g. Minimum moisture content 19.42%

*Note: Please complete if other than the maximum design capacity (tons per hour and tons per year) and/or the maximum hours of operation (24 hours per day, 8760 hours per year) are being requested. The permit will be limited to these values.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 3 - Fuel Usage

(This section only applies to fuel consumed/combusted within the process unit. Fuels consumed/combusted in combustion units are to be listed on the Combustion Equipment Application Form.)

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	gallons				
	Gallons				
Gasoline	Gallons				
Propane	cubic feet				
Natural Gas	cubic feet				Not Applicable
*Waste Oil	Gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s)								

If more than one type of fuel is combusted, under this operating scenario please specify primary fuel and percentage on a maximum hourly and annual basis (if fuel blending is the primary fuel, identify percentages of each fuel blended). Attach additional information to this form if necessary.

*Firing of waste oil will require multi metals test to insure fuel is non-hazardous.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment/Exhaust Stack Parameters (this section must be completed)

-Complete for emissions **exhausting through a stack, chimney or vent**: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	N/A	
Pollutant(s) Controlled		
Manufacturer		
Manufacturer's Guarantee (see Note 2)		
Stack height (feet from ground level)		
Stack inside diameter (feet)		
Temperature (°F) at design capacity		
Stack exit velocity (feet per second)		
Gas volume flow rate: Actual cubic feet per minute		
Gas volume flow rate: Dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g. raincap, horizontal discharge)		

-Complete for emissions **not** exhausting through a stack, chimney or vent: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	Wet Suppression/Water Sprays	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	N/A	
Manufacturer's Guarantee (see Note 1)	N/A	

Note: Indicate the specific point(s) of emission control application for this emission unit. This must be provided as part of the process flow diagram as required in section 7 of the General Information section of the application form.

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

Ensure wet suppression devices are operating during coal yard conveying activities. Check for visible emissions during coal yard conveying activities. Per NSPS Subpart Y, conduct an initial performance test consisting of a Method 9 opacity reading following procedures in §60.11.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.18	0.05	See emission calculations in Appendix 5
Particulates as PM ₁₀	0.18	0.05	See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

**Toquop Energy, LLC
Toquop Energy Project**

Stackout Conveyor, Stackter to Coal Pile, Coal Pile

Client Equip #	Description	Horizontal				Dust Control Mechanism	
		TPH (stph)	Belt Width (in)	LGTH (ft)	LIFT (ft)		
Stackout Conveyor	Conveyor to In-line Stackter	2500	72	325	82	Wet Suppression	
Gull Wing Stackter	In-line Stackter to Coal Pile	5000	NA	NA	NA	Wet Suppression	
Telescopng Chute	Telescopng Chute	N/A	NA	NA	NA	N/A	
Active Storage Pile (ID54)	Active Storage	NA	NA	NA	NA	Wet Suppression	
Inactive Storage Pile (ID56)	Inactive Storage	NA	NA	NA	NA	Wet Suppression & Compaction	

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
NAC 445B.2203 (State Only Requirement) Emissions of Particulate Matter - Fuel Burning Equipment 1. Source may not cause or permit the emission of PM_{10} resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas: a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{-0.568}$ 2. For the purposes of paragraphs b and c of subsection 1: a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's.	Not Fuel burning Equipment														
SIP 445.731(1)(a) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table: <table border="1" data-bbox="832 1077 946 1816"> <thead> <tr> <th data-bbox="832 1077 946 1140">Heat input in millions of BTU/hour</th> <th data-bbox="832 1140 946 1436">Maximum allowable emission of particulate matter in pounds per hour per million BTU/hour</th> </tr> </thead> <tbody> <tr> <td data-bbox="832 1436 946 1478">Up to and including 10</td> <td data-bbox="832 1478 946 1499">..... 0.600</td> </tr> <tr> <td data-bbox="832 1499 946 1520">100</td> <td data-bbox="832 1520 946 1541">..... 0.352</td> </tr> <tr> <td data-bbox="832 1541 946 1562">1,000</td> <td data-bbox="832 1562 946 1584">..... 0.206</td> </tr> <tr> <td data-bbox="832 1584 946 1605">10,000</td> <td data-bbox="832 1605 946 1626">..... 0.091</td> </tr> <tr> <td data-bbox="832 1626 946 1647">100,000</td> <td data-bbox="832 1647 946 1668">..... 0.025</td> </tr> </tbody> </table> SIP 445.731(1)(b) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{0.231}$ Where "X" = maximum equipment capacity rate in million Btu's per hour. $Y = \text{allowable rate of emission in pounds per million Btu's.}$	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million BTU/hour	Up to and including 10 0.600	100 0.352	1,000 0.206	10,000 0.091	100,000 0.025	Not Fuel Burning Equipment		
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million BTU/hour														
Up to and including 10 0.600														
100 0.352														
1,000 0.206														
10,000 0.091														
100,000 0.025														
SIP 445.731(1)(c) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{-0.568}$ where "X" = maximum equipment capacity rate in million Btu's per hour. $Y = \text{allowable rate of emission in pounds per million Btu's.}$	Not Fuel Burning Equipment														
SIP 445.731(3) - (Federally Enforceable SIP Requirement) Particulate Matter - Fuel Burning Equipment Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.	Not Fuel Burning Equipment														

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22033, 445B.22027 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Sources Not Otherwise Limited</p> <p>1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.</p> <p>2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:</p> $E = 4.10P^{0.67}$ <p>3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:</p> $E = 55P^{0.11} - 40$ <p>4. For the purposes of subsections 2 and 3:</p> <p>(a) "E" means the maximum rate of emission in pounds per hour.</p> <p>(b) "P" means the maximum allowable throughput in tons per hour.</p>		Monitor in accord with approved protocol	In compliance E < 100.4 lbs/hr Proposed Limit = 0.18 lbs/hr
<p>SIP 445.732 - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.</p> <p>SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:</p> $E = 0.0193P^{0.67} \quad (4.10P^{0.67})$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p> <p>SIP 445.732(3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:</p> $E = 11.78P^{0.11} - 18.14 \quad (55P^{0.11} - 40)$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p>		Monitor in accord with approved protocol	In Compliance E < 100.4 lbs/hr Proposed Limit = 0.18 lbs/hr

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement)</u> Sulfur Emissions - Fuel Burning Equipment 1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$ 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: $\begin{aligned} \text{Liquid fuel, } Y &= 0.4X \\ \text{Solid Fuel, } Y &= 0.6X \\ \text{Combination, } Y &= (L(0.4) - S(0.6))/(L + S) \end{aligned}$ 4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour. 5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.		Not Fuel Burning Equipment	
SIP Article 8.1 and 8.2 (Federally Enforceable SIP Requirement) Sulfur Emissions - Fuel Burning Equipment 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X (Y = 0.7X)$ $X = \text{Operating heat input in millions of kg-cal (Btu's) per hour.}$ $Y = \text{Allowable rate of sulfur emission in kg (pounds) per hour.}$ SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: $\begin{aligned} \text{Liquid Fuel} & \frac{\text{Solid Fuel}}{Y = 0.7X (Y = 0.4X)} \\ & \frac{\text{Combination Fuel}}{Y = 1.1X (Y = 0.6X)} \end{aligned}$ $Y = \frac{L(0.7) + S(1.1)}{L + S}$ $\begin{aligned} "X" &= \text{Operating input in millions of kg-cal (Btu's) per hour.} \\ "Y" &= \text{Allowable rate of sulfur emissions in kg (pounds) per hour.} \\ "L" &= \text{Percentage of total heat input derived from liquid fuel.} \\ "S" &= \text{Percentage of total heat input derived from solid fuel.} \end{aligned}$		Not Fuel Burning Equipment	
8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted. <u>NAC 445B.2204, 445B.22043, 445B.2205 (State Only Requirement)</u> Other Processes Which Emit Sulfur 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.		Not sulfur emitting process	

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Other Sulfur Emitting Processes</u></p> <p>SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} (0.292P^{0.904})$ <p>When $\bullet E \bullet$ is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p> <p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Other Sulfur Emitting Processes</u></p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p> <p>NAC 445B.22017 (State Only Requirement)</p> <p><u>Maximum Opacity of Emissions</u></p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.2203, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <ul style="list-style-type: none"> (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). <p>2. The provisions of this section and NAC 445B.2202 and 445B.2203 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p> <p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Visible Emissions from Stationary Sources</u></p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p> <p>40 CFR 60.250 – NSPS Subpart Y</p> <p><u>Standards of Performance for Coal Preparation Plants</u></p> <p>The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems. Any facility that commences construction or modification after October 24, 1974, is subject to the requirements of this subpart.</p> <p>§60.252(c) – On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, or coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.</p>	<p>Not sulfur emitting process</p>	<p>Observation of visible emissions in accord with approved protocol</p>	<p>In Compliance</p>

**INDUSTRIAL PROCESS
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

- a. Type of equipment Coal Yard Stackout Operations [See Attached Equipment List]
- b. Standard Industrial Classification (SIC) Code 4911
- c. Manufacturer of equipment TBD
- d. Model number TBD Serial number TBD *Equip. number PF1.003
- e. Date equipment manufactured: TBD
- f. Please check one:
 Temporary (At the same location for less than 12 months)
 Stationary (At the same location for more than 12 months)
- g. For crushers: size output setting, check one:
 Primary ($\geq 4"$)
 Secondary ($< 4" \text{ but } \geq 1"$)
 Tertiary ($< 1"$)
- h. Please check if portable: Portable (transportable or movable within the confines of the stationary source)
- i. UTM Coordinates 4,091,452 meters N; 746,860 meters E; Zone 12
(Please specify NAD 27 or NAD 83)
- j. Basic equipment dimensions (feet): L [See Attached] W [See Attached] H [See Attached]

*The equipment number is the facility's own numbering system for this piece of equipment.

Section 2 - Design Rate/Operating Parameters

- a. Maximum design capacity (tons per hour) 5,000 tons/hour
- b. Requested operating rate (tons per hour) 5,000 tons/hour
- c. Requested operating time: (time of day)* _____ to
Hours per day _____ Hours per year _____
- d. Batch load or charge weight (tons) (if applicable) N/A
- e. Total hours required to process batch or charge (if applicable) N/A
- f. Maximum operating rate (tons per year) 2,944,000 tons/year
- g. Requested operating rate (tons per year)* 2,944,000 tons/year
- f. Type of material processed coal
- g. Minimum moisture content 19.42%

*Note: Please complete if other than the maximum design capacity (tons per hour and tons per year) and/or the maximum hours of operation (24 hours per day, 8760 hours per year) are being requested. The permit will be limited to these values.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 3 - Fuel Usage

(This section only applies to fuel consumed/combusted within the process unit. Fuels consumed/combusted in combustion units are to be listed on the Combustion Equipment Application Form.)

Type of Fuel	Amount Used Per Hour	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)
Oil- Specify Type(s)					
	gallons				
	Gallons				
Gasoline	Gallons				
Propane	cubic feet				
Natural Gas	cubic feet				Not Applicable
*Waste Oil	Gallons				
Other					

Type of Fuel	Amount Used Per Hour (tons)	Heat Content (specify in Btus)	Ash Content (% by weight)	Sulfur Content (% by weight)	Trace Elements (% by weight)	Percent moisture	Percent volatile matter	Percent fixed carbon
Coal - Specify Type(s)								

If more than one type of fuel is combusted, under this operating scenario please specify primary fuel and percentage on a maximum hourly and annual basis (if fuel blending is the primary fuel, identify percentages of each fuel blended). Attach additional information to this form if necessary.

*Firing of waste oil will require multi metals test to insure fuel is non-hazardous.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 4 - Pollution Control Equipment/Exhaust Stack Parameters (this section must be completed)

-Complete for emissions **exhausting through a stack, chimney or vent**: (baghouse, wet scrubber, cyclone, low NO_x burner, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	N/A	
Pollutant(s) Controlled		
Manufacturer		
Manufacturer's Guarantee (see Note 2)		
Stack height (feet from ground level)		
Stack inside diameter (feet)		
Temperature (°F) at design capacity		
Stack exit velocity (feet per second)		
Gas volume flow rate: Actual cubic feet per minute		
Gas volume flow rate: Dry standard cubic feet per minute		
Unusual stack charac- teristics (e.g. raincap, horizontal discharge)		

-Complete for emissions **not** exhausting through a stack, chimney or vent: (water sprays, fogging water sprays, pneumatic fogging system, high moisture ore, no control, etc.)

	Control #1	Control #2
Type of Control (See Note 1)	Wet Suppression/Water Sprays	
Pollutant(s) Controlled	PM/PM ₁₀	
Manufacturer	N/A	
Manufacturer's Guarantee (see Note 1)	N/A	

Note: Indicate the specific point(s) of emission control application for this emission unit. This must be provided as part of the process flow diagram as required in section 7 of the General Information section of the application form.

Note 1: Specify "uncontrolled" if no pollution control device is installed.

Note 2: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

Ensure wet suppression devices are operating during coal stackout activities. Check for visible emissions during stackout activities. Per NSPS Subpart Y, conduct an initial performance test consisting of a Method 9 opacity reading following procedures in §60.11.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

Vendor operations and maintenance manual will be used to develop an operations plan, which will be implemented prior to operation.

**INDUSTRIAL PROCESS
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)	0.18	0.05	See emission calculations in Appendix 5
Particulates as PM ₁₀	0.18	0.05	See emission calculations in Appendix 5
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds			
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Attachment 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

**Toquop Energy, LLC
Toquop Energy Project**

Coal Reclaim Grate & Reclaim Conveyor

Client Equip #	Description	Horizontal			Dust Control Mechanism	
		TPH (sph)	Belt Width (in)	LGTH (ft)	LIFT (ft)	
Coal Reclaim Grate (ID55)	Coal Reclaim Grate	NA	NA	NA	NA	NA
Coal Reclaim Conveyor House	Conveyor from Reclaim Grate to Transfer House	2000	54	19500	70	Wet Suppression
Coal Transfer House Building (ID53)	Coal Transfer House Building Structure	NA	NA	NA	NA	baghouse

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Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
NAC 445B.2203 <i>(State Only Requirement)</i>			
Emissions of Particulate Matter - Fuel Burning Equipment			
1. Source may not cause or permit the emission of PM_{10} resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:			
a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat.			
b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation:			
Y = $1.02X^{0.231}$			
c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation:			
Y = $17.0X^{-0.568}$			
2. For the purposes of paragraphs b and c of subsection 1:			
a. "X" means the operating rate in million Btu's per hour.			
b. "Y" means the allowable rate of emission in pounds per million Btu's.			
SIP 445.731(1)(a) - <i>(Federally Enforceable S/P Requirement)</i>			
Particulate Matter - Fuel Burning Equipment			
Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:			

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Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.22033, 445B.22027 (State Only Requirement)</p> <p>Emissions of Particulate Matter - Sources Not Otherwise Limited</p> <p>1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3.</p> <p>2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:</p> $E = 4.10P^{0.67}$ <p>3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation:</p> $E = 55P^{0.11} - 40$ <p>4. For the purposes of subsections 2 and 3:</p> <p>(a) "E" means the maximum rate of emission in pounds per hour.</p> <p>(b) "P" means the maximum allowable throughput in tons per hour.</p>		Monitor in accord with approved protocol	In compliance E < 100.36 lbs/hr Proposed Limit = 0.18 lbs/hr
<p>SIP 445.732 - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section.</p> <p>SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation:</p> $E = 0.0193P^{0.67} \quad (4.10P^{0.67})$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p> <p>SIP 445.732 (3) - (Federally Enforceable SIP Requirement)</p> <p>Particulate Matter - Industrial Sources</p> <p>When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation:</p> $E = 11.78P^{0.11} - 18.14 \quad (55P^{0.11} - 40)$ <p>"E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour.</p>		Monitor in accord with approved protocol	In Compliance E < 100.36 lbs/hr Proposed Limit = 0.18 lbs/hr

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Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>NAC 445B.2204, 445B.22043, 445B.22047 (State Only Requirement)</u> <u>Sulfur Emissions - Fuel Burning Equipment</u> 1. Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. 2. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$ 3. Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: $\begin{aligned} \text{Liquid fuel, } Y &= 0.4X \\ \text{Solid Fuel, } Y &= 0.6X \\ \text{Combination, } Y &= (L(0.4) - S(0.6))/(L + S) \end{aligned}$ 4. For the purposes of subsections 2 and 3: (a) "X" means the operating input of heat in millions of Btu's per hour. (b) "Y" means the allowable rate of emission of sulfur in pounds per hour. 5. For the purposes of subsection 3: (a) "L" means the percentage of total input of heat derived from liquid fuel. (b) "S" means the percentage of total heat derived from solid fuel.	SIP Article 8.1 and 8.2 (<i>Federally Enforceable SIP Requirement</i>) <u>Sulfur Emissions - Fuel Burning Equipment</u> 8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X (Y = 0.7X)$ $X = \text{Operating heat input in millions of kg-cal (Btu's) per hour.}$ $Y = \text{Allowable rate of sulfur emission in kg (pounds) per hour.}$ SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations: $\frac{\text{Liquid Fuel}}{Y = 0.7X (Y = 0.4X)} \quad \frac{\text{Solid Fuel}}{Y = 1.1X (Y = 0.6X)}$ $\frac{\text{Combination Fuel}}{Y = \frac{L(0.7) + S(1.1)}{L + S}}$ $\begin{aligned} "X" &= \text{Operating input in millions of kg-cal (Btu's) per hour.} \\ "Y" &= \text{Allowable rate of sulfur emissions in kg (pounds) per hour.} \\ "L" &= \text{Percentage of total heat input derived from liquid fuel.} \\ "S" &= \text{Percentage of total heat input derived from solid fuel.} \end{aligned}$ 8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.	<u>NAC 445B.2204, 445B.22043, 445B.2205 (State Only Requirement)</u> <u>Other Processes Which Emit Sulfur</u> 1. Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ 2. For the purposes of subsection 1: (a) "E" means the allowable sulfur emission in pounds per hour. (b) "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour.	Not Fuel Burning Equipment Not Fuel Burning Equipment

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EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Other Sulfur Emitting Processes</u></p> <p>SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} (0.292P^{0.904})$ <p>When $\bullet E \bullet$ is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p> <p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Other Sulfur Emitting Processes</u></p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p> <p>NAC 445B.22017 (State Only Requirement)</p> <p><u>Maximum Opacity of Emissions</u></p> <ol style="list-style-type: none"> 1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.2203, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods: <ol style="list-style-type: none"> (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). 2. The provisions of this section and NAC 445B.2202 and 445B.2203 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption. <p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Visible Emissions from Stationary Sources</u></p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p> <p>40 CFR 60.250 – NSPS Subpart Y</p> <p><u>Standards of Performance for Coal Preparation Plants</u></p> <p>The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems. Any facility that commences construction or modification after October 24, 1974, is subject to the requirements of this subpart.</p> <p>§60.252(c) – On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.</p>	<p>Not sulfur emitting process</p>	<p>Observation of visible emissions in accord with approved protocol</p>	<p>In Compliance</p>
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Other Sulfur Emitting Processes</u></p> <p>SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} (0.292P^{0.904})$ <p>When $\bullet E \bullet$ is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour,</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p> <p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Other Sulfur Emitting Processes</u></p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p> <p>NAC 445B.22017 (State Only Requirement)</p> <p><u>Maximum Opacity of Emissions</u></p> <ol style="list-style-type: none"> 1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.2203, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods: <ol style="list-style-type: none"> (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A. of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). 2. The provisions of this section and NAC 445B.2202 and 445B.2203 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption. <p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p><u>Visible Emissions from Stationary Sources</u></p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p> <p>40 CFR 60.250 – NSPS Subpart Y</p> <p><u>Standards of Performance for Coal Preparation Plants</u></p> <p>The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems. Any facility that commences construction or modification after October 24, 1974, is subject to the requirements of this subpart.</p> <p>§60.252(c) – On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.</p>	<p>Observation of visible emissions in accord with approved protocol</p>	<p>In Compliance</p>	
		<p>Performance testing will be conducted in accord with §60.8, and Method 9 and the procedures in §60.11 will be used to determine opacity.</p>	<p>In Compliance</p>

**LIQUID STORAGE TANK
APPLICATION FORM
CLASS I OPERATING PERMIT TO CONSTRUCT**

Check here if this is an
alternative operating scenario

Section 1 - Equipment Description

a.	Manufacturer of tank <u>TBD</u>		
b.	SIC Code <u>4911</u>	c.	Liquid Stored <u>Distillate Fuel Oil</u>
d.	Date of installation <u>TBD</u>		
e.	Tank Dimensions:		
	Shell height (feet) <u>50</u>	Shell diameter (feet) <u>70</u>	
	Liquid height (feet) <u>40</u>	Average liquid height (feet) <u>25</u>	
	Volume (gallons) <u>1,060,000</u>		
f.	Paint characteristics:		
	Shell color/shade (please check one)	<input checked="" type="checkbox"/> White/white <input type="checkbox"/> Aluminum/diffuse <input type="checkbox"/> Gray/medium	<input type="checkbox"/> Aluminum/specular <input type="checkbox"/> Gray/light <input type="checkbox"/> Red/primer
	Shell condition <u>Good</u>		
g.	Roof color/shade (please check one)	<input checked="" type="checkbox"/> White/white <input type="checkbox"/> Aluminum/diffuse <input type="checkbox"/> Gray/medium	<input type="checkbox"/> Aluminum/specular <input type="checkbox"/> Gray/light <input type="checkbox"/> Red/primer
	Roof condition <u>Good</u>		
h.	Roof characteristics: Type (please check one):		
	<input checked="" type="checkbox"/> Cone <input type="checkbox"/> Dome <input type="checkbox"/> External floating roof <input type="checkbox"/> Internal floating roof		
	For cone or dome roof, specify height (feet) <u>1.2</u>		
	For cone roof, specify slope (ft/ft) <u>0.03</u>		
	For dome roof, specify radius (feet)		
	Tank construction: <input checked="" type="checkbox"/> welded <input type="checkbox"/> riveted		
	Primary rim seal: <input type="checkbox"/> vapor-mounted <input type="checkbox"/> liquid-mounted <input type="checkbox"/> mechanical shoe NA		
	Secondary seal: <input type="checkbox"/> weather shield <input type="checkbox"/> rim-mounted <input type="checkbox"/> none NA		
	Roof type: <input type="checkbox"/> pontoon <input type="checkbox"/> double deck NA		
	Roof fittings: <input checked="" type="checkbox"/> access hatch <input type="checkbox"/> gauge-float well <input checked="" type="checkbox"/> gauge-hatch/sample well		
	<input checked="" type="checkbox"/> rim vent <input type="checkbox"/> roof drains <input type="checkbox"/> roof leg <input type="checkbox"/> unslotted guide pole wells		
	<input type="checkbox"/> slotted guidepole/sample wells <input type="checkbox"/> vacuum breaker		
j.	For internal floating roof, please complete the following:		
	Primary seal: <input type="checkbox"/> resilient foam-filled <input type="checkbox"/> wiper seals <input type="checkbox"/> other (please specify) NA		
	Secondary seal: <input type="checkbox"/> resilient foam-filled <input type="checkbox"/> wiper seals <input type="checkbox"/> other (please specify) NA		
	Roof fittings: <input type="checkbox"/> access hatch <input type="checkbox"/> gauge-float well <input type="checkbox"/> gauge-hatch/sample well NA		
	<input type="checkbox"/> rim vent <input type="checkbox"/> roof drains <input type="checkbox"/> roof leg NA		
	<input type="checkbox"/> unslotted guide pole wells <input type="checkbox"/> slotted guidepole/sample wells NA		
	<input type="checkbox"/> vacuum breaker <input type="checkbox"/> column wells (# of columns <u> </u>) NA		
	<input type="checkbox"/> Ladder wells <input type="checkbox"/> stub drains NA		
k.	True vapor pressure of liquid (psia) <u>0.0085</u> l. Reid vapor pressure of liquid (psi) _____		
m.	UTM Coordinates <u>4,091,402</u> meters N; <u>746,443</u> meters E; Zone 12 (Please specify NAD 27 <input type="checkbox"/> or NAD 83 <input checked="" type="checkbox"/>) Location identified is Centroid of tank		

**LIQUID STORAGE TANK
APPLICATION FORM
CONTINUED**

Section 2 - Operating Parameters

- | | |
|----|--|
| a. | Maximum throughput (gallons per year) <u>5,300,000 gallons</u> |
| b. | Method of filling (submerged fill) <u>submerged fill</u> |

Section 3 - Reserved

Section 4 - Pollution Control Equipment (this section must be completed)

-Complete for emissions exhausting through a stack, chimney or vent: (baghouse, wet scrubber, cyclone, internal floating roof, no control, etc.)

	Control #1	Control #2
Type of Control: (Specify "uncontrolled" if no pollution control device is installed)	uncontrolled	
Pollutant(s) Controlled	NA	
Manufacturer	TBD	
Manufacturer's Guarantee (see Note 1)		
Stack height (feet from ground level)	51.0	
Stack inside diameter (feet)	1.0	
Temperature (°F) at design capacity	ambient	
Stack exit velocity (feet per second)	NA	
Gas volume flow rate: actual cubic feet per minute	NA	
Gas volume flow rate: dry standard cubic feet per minute	NA	
Unusual stack characteristics (e.g., raincap, horizontal discharge)	Raincap	

Note 1: Manufacturer's guarantee of control efficiency must be attached to this form if the control efficiency claimed is greater than the control efficiency ratings provided in the Bureau of Air Pollution Control's Emissions Control Technology - Control Efficiency Ratings provided in Attachment 4.

**LIQUID STORAGE TANK
APPLICATION FORM
CONTINUED**

Section 5 - Identify and Describe Compliance Monitoring Devices or Activities (attach additional pages if necessary)

Keep records of type of liquid stored in tank, and dimensions of vessel to verify capacity.

Section 6 - Identify and Describe Work Practice Standards, Etc. (attach additional pages if necessary)

**LIQUID STORAGE TANK
APPLICATION FORM
CONTINUED**

Section 7 - Requested Emission Limits

Pollutant	Potential to Emit (pounds/hour*)	Potential to Emit (tons/year)	Calculation (including reference) on Which Emissions Information is Based (attach supporting information if necessary)
Total Particulate Matter (PM)			
Particulates as PM ₁₀			
Sulfur Dioxide			
Carbon Monoxide			
Oxides of Nitrogen			
Volatile Organic Compounds	524.28 lbs/yr		See EPA TANKS 4.0 calculations in Appendix 5
Lead			
Hydrogen Sulfide			
Hazardous Air Pollutants (Specify Each Pollutant ¹)			
Other Regulated Pollutants (Specify ²)			

*Note: Alternative emissions limitations (e.g., lb/MMBtu, ppm, grains/dscf) may be requested by the applicant. If alternative emissions limitations are requested, please clearly describe the units in column 2 of Section 5 above.

¹A list of Hazardous Air Pollutants is contained in Appendix 4.

²Other Regulated Pollutants include any Class I or Class II substance subject to a standard adopted pursuant to 42 U.S.C. SS 7671-8671q, inclusive.

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status												
<p>NAC 445B.2203 (<i>State Only Requirement</i>)</p> <p>Emissions of Particulate Matter - Fuel Burning Equipment</p> <p>1. Source may not cause or permit the emission of PM₁₀ resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth in the following formulas:</p> <ul style="list-style-type: none"> a. For input of heat equal to or greater than 4 million Btu's per hour, but less than or equal to 10 million Btu's per hour, the allowable emission is 0.6 of a pound per million Btu's of input of heat. b. For input of heat greater than 10 million Btu's per hour, but less than 4,000 million Btu's per hour, the allowable emissions must be calculated using the following equation: $Y = 1.02X^{-0.231}$ c. For input of heat equal to or greater than 4,000 million Btu's per hour, the emission must be calculated using the following equation: $Y = 17.0X^{-0.568}$ <p>2. For the purposes of paragraphs b and c of subsection 1:</p> <ul style="list-style-type: none"> a. "X" means the operating rate in million Btu's per hour. b. "Y" means the allowable rate of emission in pounds per million Btu's. <p>SIP 445.731(1)(a) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Source shall not cause, suffer, allow or permit the emission of particulate matter resulting from the combustion of fuel in excess of the quantity set forth in the following table:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th data-bbox="784 1079 833 1142">Heat input in millions of BTU/hour</th> <th data-bbox="833 1079 882 1459">Maximum allowable emission of particulate matter in pounds per hour per million</th> </tr> </thead> <tbody> <tr> <td data-bbox="882 1142 931 1459">Up to and including 10</td> <td data-bbox="931 1142 948 1459">..... 0.600</td> </tr> <tr> <td data-bbox="948 1142 997 1459">100</td> <td data-bbox="997 1142 1013 1459">..... 0.352</td> </tr> <tr> <td data-bbox="1013 1142 1062 1459">1,000</td> <td data-bbox="1062 1142 1078 1459">..... 0.206</td> </tr> <tr> <td data-bbox="1078 1142 1127 1459">10,000</td> <td data-bbox="1127 1142 1144 1459">..... 0.091</td> </tr> <tr> <td data-bbox="1144 1142 1192 1459">100,000</td> <td data-bbox="1192 1142 1209 1459">..... 0.025</td> </tr> </tbody> </table> <p>SIP 445.731(1)(b) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs greater than 10 but less than 4,000 million Btu's per hour, the allowable emissions shall be calculated by using the following equation: $Y = 1.02X^{-0.231}$</p> <p>Where "X" = maximum equipment capacity rate in million Btu's per hour.</p> <p>"Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(1)(c) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>For heat inputs equal to or greater than 4,000 million Btu's per hour, the emissions shall be calculated by using the following equation: $Y = 17.0X^{-0.568}$</p> <p>where "X" = maximum equipment capacity rate in million Btu's per hour.</p> <p>"Y" = allowable rate of emission in pounds per million Btu's.</p> <p>SIP 445.731(3) - (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Particulate Matter - Fuel Burning Equipment</p> <p>Air conditioning equipment or fuel burning equipment having a rating of less than one million kilogram-calories (4 million Btu's) per hour shall be exempted from provisions of this section.</p>	Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million	Up to and including 10 0.600	100 0.352	1,000 0.206	10,000 0.091	100,000 0.025	<p>Not Applicable to Storage Tanks</p>	<p>Not Applicable to Storage Tanks</p>	<p>Not Applicable to Storage Tanks</p>
Heat input in millions of BTU/hour	Maximum allowable emission of particulate matter in pounds per hour per million														
Up to and including 10 0.600														
100 0.352														
1,000 0.206														
10,000 0.091														
100,000 0.025														

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<u>Emissions of Particulate Matter - Sources Not Otherwise Limited</u> NAC 445B.22033, 445B.22027 (<i>State Only Requirement</i>) <ul style="list-style-type: none"> 1. Owners or operators of stationary sources not otherwise included in NAC 445B.22027 to 445B.22037, inclusive, shall not cause or permit PM₁₀ to be discharged from any emission unit into the atmosphere in excess of the allowable emission determined by the use of the formula contained in subsection 2 or 3. 2. When the maximum allowable throughput is less than 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 4.10P^{0.67}$ 3. When the maximum allowable throughput equals or exceeds 30 tons per hour, the maximum allowable weight discharge per hour must be determined by using the following equation: $E = 55P^{0.11} - 40$ 4. For the purposes of subsections 2 and 3: <ul style="list-style-type: none"> (a) "E" means the maximum rate of emission in pounds per hour. (b) "P" means the maximum allowable throughput in tons per hour. 	Not Applicable to Liquid Storage Tanks		
<u>SIP 445.732 - (Federally Enforceable SIP Requirement)</u> <u>Particulate Matter - Industrial Sources</u> Sources not otherwise included in these regulations (SIP) shall not cause, suffer, allow, or permit particulate matter to be discharged from any single source into the atmosphere in excess of the allowable emission shown in the following table. When the process weight falls between two values in the table, the maximum weight discharged per hour shall be determined by the use of the formulas contained in this section. SIP 445.732(2) - When the process weight rate is less than 30,000 kilograms (60,000 pounds) per hour, the maximum allowable weight discharged per hour will be determined by using the following equation: $E = 0.0193P^{0.67} (4.10P^{0.67})$ <ul style="list-style-type: none"> "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour. <u>SIP 445.732 (3) - (Federally Enforceable SIP Requirement)</u> <u>Particulate Matter - Industrial Sources</u> When the process weight rate equals or exceeds 30,000 kilograms (60,000 pounds) per hour the maximum allowable discharge per hour will be determined by using the following equation: $E = 11.78P^{0.11} - 18.14 (55P^{0.11} - 40)$ <ul style="list-style-type: none"> "E" = Maximum rate of emission in kilograms (pounds) per hour. "P" = Process weight rate in kilograms (tons) per hour. 	Not Applicable to Liquid Storage Tanks		

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>NAC 445B.2204, 445B.22043, 445B.22047 <i>(State Only Requirement)</i></p> <p>Sulfur Emissions - Fuel Burning Equipment</p> <ol style="list-style-type: none"> Source may not cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formula in subsection 2 or 3. Where an emission unit has a total input of heat of less than 250 million Btu's per hour the allowable emission must be calculated by the use of the following equation: $Y = 0.7X$ Where an emission unit has a total input of heat equal to or greater than 250 million Btu's per hour, the allowable emission of sulfur must be calculated by the use of the following equation: $\text{Liquid fuel, } Y = 0.4X$ $\text{Solid Fuel, } Y = 0.6X$ $\text{Combination, } Y = (L(0.4) - S(0.6))/(L + S)$ For the purposes of subsections 2 and 3: <ol style="list-style-type: none"> "X" means the operating input of heat in millions of Btu's per hour. "Y" means the allowable rate of emission of sulfur in pounds per hour. For the purposes of subsection 3: <ol style="list-style-type: none"> "L" means the percentage of total input of heat derived from liquid fuel. "S" means the percentage of total heat derived from solid fuel. <p>SIP Article 8.1 and 8.2 (<i>Federally Enforceable SIP Requirement</i>)</p> <p>Sulfur Emissions - Fuel Burning Equipment</p> <p>8.2.1.1 - Where a source located on contiguous property has a total heat input of less than 63 million kg-cal (250 million Btu's) per hour the following allowable emission shall be calculated by the use of the following equation: $Y = 1.26X \quad (Y = 0.7X)$ $"X" = \text{Operating heat input in millions of kg-cal (Btu's) per hour.}$ $"Y" = \text{Allowable rate of sulfur emission in kg (pounds) per hour.}$</p> <p>SIP Article 8.2.1.2 - Where a source located on contiguous property has a total heat input of equal to or greater than 63 million kg-cal (250 million Btu's) per hour, the allowable sulfur emission shall be calculated by the use of the following equations:</p>	$\text{Liquid Fuel} \quad Y = 0.7X \quad (Y = 0.4X)$ $\text{Solid Fuels} \quad Y = 1.1X \quad (Y = 0.6X)$ $\text{Combination Fuel} \quad Y = \frac{L(0.7) + S(1.1)}{L + S}$ <p>"X" = Operating input in millions of kg-cal (Btu's) per hour. "Y" = Allowable rate of sulfur emissions in kg (pounds) per hour. "L" = Percentage of total heat input derived from liquid fuel. "S" = Percentage of total heat input derived from solid fuel.</p> <p>8.2.2 - For purposes of Article 8, "sulfur emission" means the sulfur portion of the sulfur compounds emitted.</p> <p>NAC 445B.2204, 445B.22043, 445B.2205 <i>(State Only Requirement)</i></p> <p>Other Processes Which Emit Sulfur</p> <ol style="list-style-type: none"> Source may not cause or permit the emission of sulfur compounds where the sulfur originates in the material being processed, excluding hydrogen sulfide and sulfur from all solid, liquid, or gaseous fuel, in excess of the quantity determined by the following equation: $E = 0.292P^{0.904}$ For the purposes of subsection 1: <ol style="list-style-type: none"> "E" means the allowable sulfur emission in pounds per hour. "P" means the total feed sulfur, excluding hydrogen sulfide, in pounds per hour. 	<p>Not Applicable to Storage Tanks</p> <p>Not Applicable to Storage Tanks</p> <p>Not Applicable to Storage Tanks</p> <p>Not Applicable to Fuel Storage Tanks</p>	

SECTION 8
EMISSION UNIT SPECIFIC
APPLICABLE REQUIREMENTS, TEST METHODS, AND COMPLIANCE STATUS

Applicable Requirement Citation and Description	Explanation of A Proposed Exemption	Test Methods and/or Monitoring	Compliance Status
<p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(1) - Source shall not cause, suffer, allow or permit the emission of sulfur compounds where the sulfur originates in the material being processed (excluding sulfur from solid, liquid, or gaseous fuel), in excess of the quantity determined by the following equation:</p> $E = 0.271P^{0.904} \quad (0.292P^{0.904})$ <p>When $\bullet E \bullet$ is equal to or greater than 5 kilograms (10 pounds) per hour.</p> <p>Where:</p> <p>"E" is the allowable sulfur emission in kilograms (pounds) per hour.</p> <p>"P" is the total feed sulfur in kilograms (pounds) per hour.</p> <p>SIP 445.746(1) - When "E" is less than 5 kilograms (10 pounds) per hour, the gas stream concentration shall not exceed 1,000 ppm by volume.</p> <p>SIP 445.746 - <i>(Federally Enforceable SIP Requirement)</i></p> <p>Other Sulfur Emitting Processes</p> <p>SIP 445.746(3) - When sulfur emissions are due to sulfur contributions from both the fuel and the material being processed, the allowable emissions shall be the sum of those allowed by the provisions of this section.</p> <p>NAC 445B.22017 <i>(State Only Requirement)</i></p> <p>Maximum Opacity of Emissions</p> <p>1. Except as otherwise provided in this section and NAC 445B.2202 and 445B.22023, no owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:</p> <ul style="list-style-type: none"> (a) If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A, of 40 C.F.R. Part 60. (b) If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 C.F.R. §60.13(h). <p>2. The provisions of this section and NAC 445B.2202 and 445B.22023 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.</p> <p>SIP 445.721 <i>(Federally Enforceable SIP Requirement)</i></p> <p>Visible Emissions from Stationary Sources</p> <p>These regulations (SIP) shall not apply if the presence of uncombined water is the only reason for the failure of an emission to comply with these regulations. The burden of proof to establish the application of this exemption shall be upon the person seeking to come within this exemption.</p> <p>40 CFR 60.110b – NPSR Subpart Kb</p> <p>Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984.</p> <p>This regulation applies to each storage vessel with a capacity greater than 40 m³ that is used to store volatile organic liquids (VOLs) for which construction, reconstruction, or modification is commenced after July 23, 1984.</p> <ol style="list-style-type: none"> 1. Except as specified in paragraphs (a) and (b) of §60.116b, vessels with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure less than 3.5 kPa are exempt from the General Provisions (Part 60, Subpart A) and from the provisions of this subpart. 2. The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source. <p>(b) The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.</p>	<p>Not Applicable to Fuel Storage Tanks</p>	<p>No testing or monitoring requirements apply. Records of storage tank dimension and capacity will be kept for the life of the source</p>	<p>In Compliance</p>